New York State Museum Bulletin

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The University of the State of New York
New York State Museum

JOHN M. CLARKE, *Director*

HOMER D. HOUSE, *State Botanist*

REPORT OF THE STATE BOTANIST FOR 1919

	PAGE
Introduction	5
Local Flora Notes VII	7
Notes on Fungi VII	15
An Index to the New York Species of Mycosphaerella	25
New or Noteworthy Species of Fungi II. JOHN DEARNESS and HOMER D. HOUSE	32
Studies in the Genus Inocybe C. H. KAUFFMAN	43
Necessary Changes of Certain Plant Names	60
Index	71

ALBANY

THE UNIVERSITY OF THE STATE OF NEW YORK

1921

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The University of the State of New York
Science Department, September 3, 1920

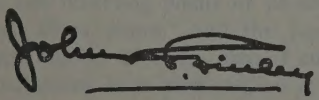
Dr John H. Finley
President of the University

SIR:

I have the honor to communicate herewith and to recommend for publication as a bulletin of the State Museum, the annual report of the State Botanist for the year 1919.

Very respectfully yours
JOHN M. CLARKE
Director

Approved for publication



President of the University

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The University of the State of New York
New York State Museum

JOHN M. CLARKE, Director

REPORT OF THE STATE BOTANIST FOR 1919

Scientific investigations. The investigative work of the State Botanist during the season of 1919 has been greatly handicapped by the lack of office assistance. Field work in connection with the study of the vegetation and fungi consisted of a few days spent in southern Herkimer county, the region east of Oneida lake, Lake Bonaparte and in Bergen swamp, Genesee county. About two weeks were spent during August along the Fulton Chain of lakes in the Adirondack region.

In spite of various obstacles a considerable amount of valuable field work was completed and a large number of fungi, ferns and flowering plants were collected, most of which will be incorporated into the herbarium as a permanent record of their distribution. The ferns and flowering plants of peculiar interest are reported under "Local Flora Notes," and the fungi under "Notes on Fungi." A large number of fungi, both of current collections and also from the herbarium have been studied in collaboration with Prof. John Dearness and reported under "New and Interesting Species of Fungi."

The species of fungi belonging to the genus Inocybe as represented in the state herbarium, have been carefully studied by Dr C. H. Kauffman, and the results are offered here in a paper entitled "The Species of Inocybe in Peck's Collections."

Catalog of the ferns and flowering plants of New York. The earliest catalog of the plants of the State of New York was published in 1814 by Jacob Green. This was closely followed in 1819 by John Torrey's catalog of the plants growing within 30 miles of New York City. Torrey's catalog of the plants of the State appeared in 1840, and his two volume flora in 1843. These were followed by revised lists of the plants of the State in 1849 and 1866.

These admittedly incomplete lists form the basis for the additions and corrections carried forward by the late Dr Charles Horton Peck, as State Botanist, with each annual report from 1869 to 1913. No complete list of the plants of the entire State has been published, however, since 1866. The preparation of this catalog of the plants of the state is practically completed and it will soon be presented for publication as a separate bulletin. Reports of doubtful value have been verified wherever possible or else the report is stated to rest only upon a certain published record.

Noteworthy contributions to the state herbarium. The chief additions to the state herbarium during the past year in the form of contributions and exchanges are presented in the following list of contributors, which also indicates the number of specimens received from each:

	SPECIMENS
New York Botanical Garden, New York	80
Stewart H. Burnham, Hudson Falls	38
Dr J. J. Davis, Madison, Wis	20
D. M. White, Rochester	9
E. P. Killip, Rochester	5
George Morris, Peterborough, Canada	5
Dr W. Haydon, Marshfield, Ore	5
John Dearness, London, Canada	5
Edward A. Eames, Buffalo	3
William H. Limberger, Middletown	3
Dr L. O. Overholts, State College, Pa	3
Charlotte Bogardus, Coxsackie	2
F. J. Braendle, Washington, D. C	2
Dr L. Romell, Stockholm, Sweden	1
A. H. King, Albany	1
A. M. Henry, Tallahassee, Fla	1
C. A. Mabie, Holley	1
H. R. Bayne, East Jewett	1
Total	185

Additions to the herbarium. The number of specimens which have been added to the herbarium from all sources during the past year is 635. Of these, 185 were received in exchange or as contributions. Four hundred fifty specimens were collected by the botanist in the counties of Albany, Genesee, Hamilton, Herkimer, Lewis, Madison, Monroe, Oneida, Onondaga, Rensselaer and Ulster. The number of specimens added to the herbarium which represent species not previously contained in the collections was 75. This includes 14 species of fungi described as new species, and two flowering plants described as new species.

Identifications. The State Botanist's office has been called upon to identify and report upon 340 specimens of plants, including many

Trees in Washington Park, Albany, N. Y., damaged by the ice storm of November 1919

fungi and mushrooms. These identifications were asked for by 122 different persons.

Damage to trees by ice. The damage done to trees by ice and sleet is of rather frequent occurrence in this climate, and nearly every year, in some localities, there is record of more or less serious injury, especially to shade and park trees. Rarely, however, has there been such severe injury caused by ice as occurred in the latter part of November 1919. A cold rain which froze as it fell accumulated upon the branches and twigs of the trees to a thickness of half an inch in many places. The weather increased in coldness and the ice remained upon the branches for 36 to 48 hours or longer. Absence of heavy wind alone apparently saved many trees from almost complete destruction, but even without any wind the trees suffered greatly, as indicated by the accompanying illustration (figure 1), from a photograph taken in Washington Park, Albany, by William C. Oke. Elm trees apparently suffered the greatest damage, but even trees with such tough wood as hickory were not immune and suffered the loss of large limbs.

LOCAL FLORA NOTES VII

Albany County

Calamagrostis inexpansa A. Gray

Marshy meadow near Karner, Albany county, *H. D. House, No. 6417,* July 7, 1919. A grass of the coastal plain region, not unexpected, however, at Karner, in a region where many other coastal plain species have been found.

Leptoloma cognatum (Schultes) Chase

Sandy fields near Albany, *H. D. House, No. 6568,* July 28, 1919. This grass, a native of the middle west and southern states, has been previously recorded from New Hampshire and from Long Island (Taylor, Fl. Vic. N. Y. 99. 1915). Its appearance near Albany is recent but it has already spread rapidly and is found commonly over a large area of sandy country west of the city.

Poa cuspidata Nutt

Along a shaded path, McKown's grove, near Albany, *H. D. House, No. 6052,* May 30, 1919.

Chamaesyce vermiculata (Raf.) comb. nov.

Euphorbia vermiculata Raf., Am. Mo. Mag., 2: 206. Jan. 1818.
E. maculata Michx. Fl. Bor., Am., 2: 212. 1803. Not L.
E. hypericifolia var. *hirsuta* Torr., Fl. N. & Mid. St. 331. 1826.
E. hirsuta Wiegand, Bot. Gaz., 24: 51. 1897. Not Schur. 1853.
E. rafinesqui Greene, Pittonia, 3: 207. 1897.
Chamaesyce rafinesqui Small; Britton & Brown, Illus. Fl., ed. 2, 2: 467. 1913.

In sandy and gravelly soil. Frequent along the Hudson river in Albany county, and apparently also across the State south of the Adirondack region.

Doctor Greene (Pittonia, 3: p. 207) in renaming E. hirsuta Wiegand, does not state which of the three species of Euphorbia described by Rafinesque, he considered the same as this species, merely remarking that the name was preoccupied. Of the three species referred to, only E. littoralis appears to be preoccupied name, and that, described as possessing pubescent capsules, can not be this species. E. supina Raf. is clearly a synonym of E. maculata L., and E. littoralis Raf. is a fairly good description of what is now called E. humistrata. E. vermiculata is well described and can only apply to this species which has glabrous capsules, along with the other characters which he mentions. It is common along the Hudson river, the upper portion of which is the type locality of the plant described by Rafinesque.

Rafinesque's description reads as follows:

21 Sp Euphorbia vermiculata Raf. Upright, nearly dichotomous, pilose: leaves opposite, shortly petiolated, oblong acute acuminate serrate trinerved, base oblique, thin, vermiculate — dotted: flowers solitary in the dichotomies peduncled upright, perianthe campanulated fourcleft, sepals ovate entire, capsules smooth.— Obs. Found in August, 1816, near Sandyhill and Glens Falls, State of New York, in fields. Small annual plant, flowers reddish: the vermicular transparent dots of the leaves are very remarkable.

Panicum scribnerianum Nash

On dry hilltop in thin soil overlying shale rock, Glenmont south of Albany, *H. D. House, No. 6579,* July 29, 1919.

Genesee County

Panicum lindheimeri Nash

Common in the open marly bogs of Bergen swamp, *H. D. House, No. 6519, 6520,* July 18, 1919. Also collected here in 1904 by Doctor Peck, and a Bergen specimen collected by E. J. Hill is cited by Hitchcock and Chase in their monograph of the genus Paricum.

Greene County

Orontium aquaticum L.

On an island in the Hudson river at Coxsackie, *Charlotte Bogardus.* For the northward distribution of this species in New York, see Museum Bulletin 179, p. 40 (1915). Except for a specimen said to have been collected in Fulton county in 1884, this is the most northerly recorded station for the Golden Club, in New York.

Madison County

Panicularia borealis (Nash) Batchelder

In wet places, Pecksport, *H. D. House, No. 6563,* July 21, 1919.

Lewis County

Carex albicans Willd.

Common on rocky ledges along the shore of Lake Bonaparte, *H. D. House, No. 6210,* June 14, 1919.

Carex albursina Sheldon

Common in rich woods near Lake Bonaparte, *H. D. House, No. 6252,* June 14, 1919.

Carex tenuiflora Wahl.

In sphagnum under shade of spruce and tamarack, Bonaparte swamp, with such typical northern bog plants as Ophrys cordata, Lysiella obtusata, Carex trisperma and Carex disperma. One of the rarest of the sedges of this State. Formerly in Oriskany swamp, Oneida county (Kneiskern, June 8, 1840 in Sartwell herbarium); swamp west of Fort Bull, J. A. Paine (Cat. p. 152, 1865) and Ogdensburg, Crawe (Torrey, Fl. N. Y., 2: 381. 1843). In the first two localities it is long since exterminated and the only other recent collection is from the East Lake George marsh where it was collected by S. H. Burnham.

Bonaparte Swamp

In 1900 Doctor Peck gave a most interesting account of the vegetation of Bonaparte swamp in the extreme northern end of Lewis county. This account does not indicate the time of year during which his observations were made but reference to his notebooks shows it to have been during July 1888, and the additional species found there June 24–26, 1904, are recorded in Bulletin 94.

The swamp is of such a large size that it is not at all surprising that two different observers, working even at the same season of the year, might record lists of plants which varied considerably as to the minor or rarer species. For instance, Doctor Peck remarks upon the absence of Viola cucullata, Veratrum viride, Calla palustris and Carex intumescens, which were observed by the writer as common there, at least in certain portions of the swamp visited, and which may have been just the portions which Doctor Peck did not explore. On the other hand, Doctor Peck records quite a number of species which do not appear in my notes, made between June 13 and 16, 1919. It is difficult, however, to imagine how he could have overlooked certain very common plants like Cypripedium parviflorum, Arethusa bulbosa, Viola renifolia, Polygala paucifolia, Pyrola uliginosa and Lonicera oblongifolia unless the vegetative aspect of the swamp has undergone great changes since the time of his visit, which does not seem probable, although some lumbering and wood cutting have taken place. The collections made there in 1919 include 105 different species, in addition to notes made upon the general vegetation which includes mention of many more species recognizable without the necessity of making specimens for future reference.

The following species collected and placed in the state herbarium do not appear in Doctor Peck's list of the plants of Bonaparte swamp.

Phegopteris dryopteris (*L.*) *Fee*
Camptosorus rhizophyllus (*L.*) *Link.* On a glacial boulder in the swamp
Dryopteris cristata (*L.*) *A. Gray*
Poa pratensis *L.*
Poa alsodes *A. Gray*
Festuca obtusa *Spreng.*
Panicularia nervata (*Willd.*) *Kuntze*
Millium effusum *L.*
Carex tenuiflora *Wahl.*
" crinita *Lam.*
" gynandra *Schw.*
" vesicaria *L.*
" intumescens var. fernaldi
" leptalea *Wahl.*
" bromoides *Schk.*
" flava *L.*
Eriophorum alpinum *L.* (Reported by Peck in 1904)
Cypripedium arietinum *R. Br.*
" parviflorum *Salisb.*
Habenaria hyperborea (*L.*) *R. Br.*
" obtusata (*Pursh*) *Richards.*
" clavellata (*Michx.*) *Spreng.*
Arethusa bulbosa *L.*
Listera cordata (*L.*) *R. Br.*
Corallorrhiza trifida *Chatelain*

Streptopus roseus *Michx.*
Veratrum viride *L.*
Vagnera trifolia (*L.*) *Morong*
Unifolium canadense (*Desf.*) *Greene*
Thalictrum dioicum *L.*
Ranunculus abortivus *L.*
Cardamine pennsylvanica *Muhl.*
Cardamine pratense *L.*
Mitella diphylla *L.*
Moehringia lateriflora (*L.*) *Fenzl.*
Viola cucullata *Ait.*
" septentrionalis *Greene*
" conspersa *Reichenb.*
" incognita *Brainard* (In addition to V. pallens (*Banks*) *Br.*, both of which were included in V. blanda at the time of Peck's list)
Viola renifolia *A. Gray*
Polygala paucifolia *Willd.*
Pyrola secunda *L.*
" uliginosa *T. & G.*
Lonicera oblongifolia (*Goldie*) *Hook.*
Diervilla diervilla (*L.*) *MacM.*
Sambucus racemosa *L.*

Herkimer County

Senecio obovatus Muhl.

Open woods, hilltops south of Little Falls, *H. D. House, No. 6188.* June 10, 1919.

Panicularia fernaldii Hitchc. comb. nov.

(*Glyceria pallida* var. *fernaldii* Hitchc.)

In marshy places along a small stream near "Kenmore" on Fourth lake, *H. D. House, No. 6649,* August 9, 1919.

Lonicera glaucescens Rydb.

Wooded banks on the west side of Irondequoit bay, *H. D. House, No. 6506,* July 17, 1919.

Panicum villosissimum Nash

On sandy hillsides in partial shade, near Irondequoit, *H. D. House No. 6511,* July 17, 1919. Growing with Panicum sphaerocarpum Ell. and P. dichotomum L. In this State previously known only from the southeastern part and from Albany county.

Veronica baxteri sp. nov.

Stems 2 to 4 cm long or longer, glabrous, rooting at the lower nodes, the ends ascending. Leaves glabrous, oblong-elliptical to suborbicular, 2 to 4.5 cm long, rarely longer, one-half to more than three-fourths as broad, sometimes suborbicular in shape, obtuse or rounded at the apex, rounded or rarely subacute at the base, petioles 6–18 mm

long, margins irregularly crenate-dentate; racemes glabrous, 10–20-flowered, chiefly from the lower and middle nodes; bracts linear or linear-lanceolate, the lower ones usually exceeding the pedicels and sometimes the flowers; sepals lanceolate, 3.5 to 4 mm long, acute; corolla blue, 6–8 mm broad; capsules globose-ovoid, about 4 mm in diameter (? immature).

Moist fields near Rochester, *M. S. Baxter*, October 10, 1916. Type in the herbarium of the New York State Museum.

Related to Veronica americana, but differing chiefly in the broader leaves which are blunt or rounded at both ends, the racemes chiefly from the lower or middle nodes and the larger sepals and bracts.

Hickories of the Rochester Parks

Through the courtesy of John Dunbar of the Rochester city parks department a good collection of the native species of Hicoria of the vicinity of Rochester was secured on July 19th. Notes were made regarding the species and varieties, and while the fruits were not fully mature, the condition of them and the foliage was most favorable for study and comparison.

Hicoria ovata var. **fraxinifolia** (Sargent) Ashe.

(Jour. E. Mitch. Soc. 34: 133. 1918)
Carya ovata var. *fraxinifolia* Sargent, Trees & Shrubs, 2: 207. 1913.

A rather distinct variety, reported from the vicinity of Rochester, Monroe county; Conesus lake, Livingston county, and Mount Morris and Macedon, Wayne county; Canandaigua, Ontario county, and Indian river, Lewis county.

Hicoria ovata var. **nuttallii** (Sargent) Ashe, l. c. 132

Carya ovata var. *nuttallii* Sargent, l. c. 207.
C. microcarpa Nutt. Silva N. Am., 1: 39. *t. 13.* 1842, Not Nutt. 1818.

A small fruited form of H. ovata, occasional in western New York. Specimens from Canandaigua collected by B. H. Slavin, cited by Sargent as typical, are to be seen in the herbarium of the Rochester park department.

Hicoria glabra var. **megacarpa** (Sargent) Ashe, l. c. 134.

Carya megacarpa Sarg. Trees & Shrubs, 2: 201. pl. *CLXXX.* 1913.
Hicoria ovalis megacarpa Ashe, Torreya, 18: 74. 1918.
Carya glabra var. *megacarpa* Sarg. Bot. Gaz., 66: 244. 1918.

The type of this variety is a wild tree, growing in Seneca Park, Rochester, and occurs also in Highland Park. Specimens of the Seneca Park tree were collected and the tree is quite certainly a well-

marked variety of the common Hicoria glabra. It has been reported from near Ithaca, and occurs also near Albany (*House*, 1919).

Hicoria ovalis (Wangenheim) Ashe, l. c. 133.

Juglans ovalis Wangenheim, Nordam. Holz., 24. *t. 10. f. 23.* 1787.
Hicoria microcarpa Britton & Brown, Illus. Fl., 1:486. *f. 1157.* 1908; Britton & Shafer, N. Am. Trees, 236. *f. 193.* 1908, as to tree described, not Carya microcarpa Nutt.
Carya ovalis Sarg. Trees & Shrubs, 2:207. 1913.

Collected in Seneca and Highland Parks, Rochester, and also in Maplewood Park and on Cobb's hill. The species appears to be frequent or locally abundant across the State south of the Adirondacks. It is common near Albany and has been collected in several localities in western New York. Sargent reports it from Staten Island Several distinct variations are noticeable.

Hicoria ovalis var. **obcordata** (Muhl.) Ashe, l. c. 134.

Juglans obcordata Muhl. in Neue Schr. Ges. Nat. Fr. Berlin, 3:392. 1801.
J. porcina var. *obcordata* Pursh, Fl. Am. Sept. 638. 1814.
Carya microcarpa Nutt. Gen., 2:221, in large part. 1818.
Carya porcina Spach, Hist. Veg., 2:178. 1834. Not Nutt.
Hicoria microcarpa Britton, Torr. Club Bul., 15:283. 1888.
H. glabra var. *odorata* Sarg. Silva, 7:167, in part. 1895.
Carya ovalis var. *obcordata* Sarg. Trees & Shrubs, 2:208. 1913.

Maplewood Park, Rochester, *Laney*. Collection by *H. D. House, No. 6546,* made from same tree as Slavin's No. 55. Reported from several other localities in western New York.

Hicoria ovalis var. **odorata** (Marsh.) Ashe, l. c. 134.

Juglans alba odorata Marsh. Arb. Am. 68. 1785.
Hicoria microcarpa Britton, l.c. in part.
Carya ovalis var. *odorata* Sarg. Trees & Shrubs, 2:208. 1913.
Hicoria microcarpa Raf. Alsog. Am., 66, 67. 1838.

A rather frequent form of the small-fruited hickory, easily distinguished by the strong pungent odor of the husks. Seneca Park, *House, No. 6551.* Near Albany, *House*. Of general distribution across the State south of the Adirondacks, southward to the north shore of Long Island.

Hicoria ovalis var. **acuta** (Sargent) comb. nov.

Carya porcina var. *acuta* Sarg. Trees & Shrubs, 2:200. 1913.
C. ovalis var. *obovalis* Sarg., l.c. 209.
C. ovalis var. *obovalis* forma *acuta* Sarg. Bot. Gaz., 66:247. 1918.

Seneca Park, *B. H. Slavin, No. 4,* 1910. Collection from the same tree, *House*. Maplewood Park, *House, No. 6552* (Slavin's No.

23). Also reported from Conesus lake, *Dunbar*; and from Mendon, Monroe county, *Laney & Horsey*. There appears to be no good varietal distinction between the so-called varieties acuta and obovalis.

x Hicoria laneyi (Sargent) comb. nov.

Carya laneyi Sarg. Trees & Shrubs, 2: 196. *pl. CLXXVIII.* 1913.

A hybrid species between H. cordiformis and H. ovata. Known only from Riverside cemetery, Rochester.

x Hicoria dunbarii (Sargent) comb. nov.

Carya dunbarii Sarg. Bot. Gaz., 66: 254. 1918.

A hybrid species between H. laciniosa and H. ovata. Known from the bottomlands of the Genesee river at Golah, Monroe county, *Dunbar*; and Mount Morris, Livingston county, *Dunbar*.

Oneida County

Panicum tenessense Ashe

Fields near Taberg, *H. D. House, No. 5648*, July 21, 1914. A grass of rather general distribution, now known in this State from the counties of Fulton, Oneida, Herkimer, Essex, Tompkins and St Lawrence.

Antennaria canadensis var. **isabellina** Greene, var. nov.

(A. isabellina *Greene*, in herb.)

Similar to Antennaria canadensis, but the bracts and stems reddish, often the under surfaces of the cauline leaves tinged with red; basal leaves strongly apiculate; the outer bracts of the inflorescence with broader, white, petaloid tips, which are more conspicuous than in the typical form of the species.

Frequent in central New York, in Oneida, Herkimer and Madison counties, and represented by several collections by Dr J. V. Haberer. The type is the collection by *Haberer*, No. 3160, at Hackedam road, Frankfort Hill, Herkimer county, May 27 and June 3, 1910, in the New York State herbarium. A duplicate of this is sheet No. 647233 in the national herbarium. A collection from Twin Mountain, Vermont (*Eggleston, No. 2597*, May 26, 1901, distributed as var. randii) appears to be the same.

Tioga County

Veronica brittonii Pennell

In moist or wet places, Apalachin, Tioga county, *F. E. Fenno,* 1900 (as Veronica anagallis-aquatica). Doctor Pennell also reports this new species from New Baltimore, Greene county, Flushing, Spring Valley and Jamaica, Long Island, and Tappan, Rockland county.

Washington County

Veronica glandifera Pennell

In calcareous places, near Vaughns, Washington county, *Burnham,* 1910. Brook west of Kingsbury street, north of Hudson Falls, *Burnham,* 1918. Both specimens referred by Mr Burnham to Veronica anagallis-aquatica.

Lespedeza intermedia (S. Wats.) Britton

Hedysarum frutescens L. Sp. Pl. 748. 1753.
L. violacea var. *sessiliflora* T. & G. Fl. N. Am., 1: 367. 1840. Torr. Fl. N. Y., 1: 183. 1843. Not *L. sessiliflora* Michx.
L. reticulata S. Wats. Bibliog. Index, 1: 233. 1878. Not Pers. 1807.
L. stuvei var. *intermedia* S. Wats.; Gray, Man. ed. 6, 147. 1890.
L. frutescens Britton, Mem. Torr. Club, 5: 205. 1894. Not Elliott, 1824.

Dresden Station, Washington county, *Peck.* Apparently close to the northern limits of this species in the eastern part of the State. Southward the species is common and its range extends westward across the State to Oswego and Monroe counties.

NOTES ON FUNGI VII

The species of fungi noted in the following pages consist in part of collections by the State Botanist and also of determinations of unnamed material collected by Dr C. H. Peck, or material which was erroneously identified by Doctor Peck, especially in the Thelephoraceae, and which has been critically reexamined by Dr E. A. Burt.

The following species are apparently new to the state flora:

Aleurodiscus penicillatus *Burt*
Belonidium heteromorphum (*E. & E.*) *Sacc.*
Cladosporium gleosporoides *Atk.*
Coniophora byssoidea (*Pers.*) *Fr.*
Corticium atrovirens *Berk.*
" bombycinum *Sommerf.*
" lactescens *Berk.*
" lividum *Pers.*

Corticium roseum *Pers.*
Cyphella laeta *Fr.*
" mucigena *Pers.*
Fomitiporia laminata *Murrill*
Gloeosporium venetum *Speg.*
Hymenochaete badio-ferruginea (*Mont.*)
Hypochnus isabellinus *Fr.*
" pallescens (*Schw.*) *Burt*
Lachnea coprinaria *Cooke*
Merulius terrestris (*Peck*) *Burt*
Nectria sulphurea (*Ell. & Calk.*) *Sacc.*
Pyrenopeziza heteromorphum (*E. & E.*) *Sacc.*

Aleurodiscus farlowii Burt

Duanesburg, Schenectady county, on hemlock (Tsuga canadensis), Dr C. H. Peck (year not given). Washington county, *Burnham.*

Aleurodiscus penicillatus Burt

North Elba, Essex county, on underside of dead spruce limbs. Dr C. H. Peck.

Ascobolus geophilus Seaver

(Mycologia, 8:96. 1916)

Collected at Albany, on earth, by Dr C. H. Peck (date uncertain). Determined by Dr. F. J. Seaver. Doctor Peck apparently recognized it as undescribed and gave to it an herbarium name.

Belonidium heteromorphum (E. & E.) Sacc.

On dead culms of Spartina michauxiana Hitchc. South Bay, Madison county. H. D. House, June 17, 1918. Doctor Seaver makes this determination with some doubt. The type of the species was collected in Louisiana on Spartina, and this material from New York is closely related if not identical.

Cercospora boehmeriae Peck

On living and languishing leaves of Boehmeria cylindrica. Sylvan Beach, Oneida county. H. D. House, August 29, 1918. The type collection by Peck at South Ballston, appears to be the only other collection from this State.

Cercospora caulophylli Peck

On leaves of Caulophyllum thalictroides. Lake Bonaparte, Lewis county. H. D. House, June 15, 1919. A rather common parasitic leaf fungus upon this host. The state herbarium contains specimens from the Helderberg mountains, Peck; More-

housville, Boreas, McConnellsville and North Elba, Peck; Catskill mountains, Shear; Taberg, House.

Cercospora granuliformis Ell. & Holw.

On living and languishing leaves of Viola sororia Willd. Oneida, Madison county. H. D. House, July 17, 1918.

Cercospora longispora Peck

On leaves of Lupinus perennis L. Near New London, Oneida county. H. D. House, July 12, 1919.

Cladosporium gleosporoides Atk.

On leaves of Triadenum virginicum (L.) Raf. (Hypericum virginicum L.). Fourth lake, Herkimer county. H. D. House, August 9, 1919.

Coniophora byssoidea (Pers.) Fr.

On dead spruce wood. Ottawa, Canada; on Acer saccharinum and on old pine logs. J. M. Macoun, No. 142 (1897); No. 290 (1897); No. 317 (1892); No. 534 (1892). Determined by Dr E. A. Burt.

Calosphaeria pulchella (Pers.) comb. nov.

Sphaeria pulchella Pers. Disp., 3. 1797.
Valsa pulchella Fr. Summa Veg. Scand. 412. 1849.
Calosphaeria princeps Tul. Sel. Fung. Carp., 2: 109. t. XIII. f. 17–22. 1863.

On dead branches of Prunus pennsylvanica. Sandlake, Peck. On dead branches of Aronia arbutifolia. Karner, Peck, as Calosphaeria wahlenbergii, in herb.

Botrytis sphaeriae-typhinae (Corda) Sacc.

Parasitic on Epichloe typhina (Pers.) Tul. on Panicularia nervata. Castle swamp, Oneida, Madison county. H. D. House, July 8, 1918.

Clitocybe media Peck

42d Rep't N. Y. State Mus., p. 114 (Bot. ed., p. 18) Pl. 1, fig. 9–12 1889.
48th Rep't N. Y. State Mus., p. 271, pl. 23. fig. 1–7. 1896.

In low open woods near Oneida. H. D. House, September, 1918.

A rare species, and one apparently but little understood, the description by Peck involving two distinct things and his illustrations very defective. The redescription here is based upon the type specimens and the fresh specimens collected at Oneida.

Redescription. Pileus somewhat fleshy in the middle, 4–7 cm broad, top-shaped to nearly plane or considerably depressed in the middle, brownish gray to blackish or smoky gray, surface dry, margin somewhat irregular not inclined to be reflexed in drying. Flesh white, thin, not stained with age or drying. Gills decurrent, thick, blunt on the margin, up to 5 mm in width, sparingly dichotomously branched, distant, at first whitish becoming with age and on drying distinctly buff colored, conspicuously intervenose especially toward the margin. Stem 4–6 cm long, 5–10 mm thick, usually somewhat upwardly attenuate, glabrous-striated, pallid or grayish or smoky, but distinctly paler in color than the pileus, and white at the base, hollow in the Oneida specimens, apparently solid or stuffed in the type. Spores white in mass, broadly elliptical, 7–8 x 3–4 micr.

Peck's type collection of this species consists of two distinct things. As he pointed out in the original description "two forms are distinguishable." The ones with "lamellae slightly rounded behind and adnate or abruptly terminated" is apparently Clitocybe clavipes, at least the gills are closer and not intervenose. As to color we can not judge very accurately from the dried specimens but the colors must have been approximately the same as in C. media or he would not have confused them.

I take as the type of his Clitocybe media, those larger specimens of the original collection which show the characters upon which in the description he lays so much stress, namely, the intervenose character of the subdistant decurrent gills.

The specific name media was given to this by Peck because of its apparent position between two other species of Clitocybe. As a matter of fact it is very unlike any other species of Clitocybe, but the name media is still appropriate because the plant appears when fresh to be as properly a species of Cantherellus as of Clitocybe.

Corticium atrovirens Berk.

Syracuse. L. M. Underwood, No. 44. September 1888. Determined by Dr E. A. Burt.

Corticium bombycinum Sommf.

Kenwood, Albany county, on willow (Salix, sp.). S. H. Burnham. November 16, 1907. Determined by Dr E. A. Burt.

Corticium confluens Fr.

North Albany, on dead limbs of Crataegus; and North Elba on dead bark of balsam fir (Abies balsamea). Dr C. H. Peck. Determined by Dr E. A. Burt.

Corticium lactescens Berk.

North Greenbush. Dr C. H. Peck. Determined by Dr E. A. Burt.

Corticium lacteum Fr.

Warrensburg, Warren county, on dead limbs of balsam fir (Abies balsamea). Dr C. H. Peck, October 19. Determined by Dr E. A. Burt.

Corticium lividum Pers.

Ampersand, Franklin county, on spruce and also in the Catskill mountains, Dr C. H. Peck. Determined by Dr E. A. Burt.

Corticium roseum Pers.

Minnewaska, on fallen pine limbs. Dr C. H. Peck. Determined by Dr E. A. Burt.

Cyphella laeta Pers.

Summit, Schoharie county, on roots of some plant. Dr C. H. Peck, September. Determined by Dr E. A. Burt.

Cyphella muscigena Pers.

On moss, Polytrichum, sp. Floodwood, Franklin county. Dr C. H. Peck. Determined by Dr E. A. Burt.

Didymosphaeria parnassiae (Peck) Sacc.

On dead stems of grass-of-parnassus, Parnassia caroliniana. Bergen swamp, Genesee county. H. D. House, July 18, 1919.

Discula discoidea (Cke. & Peck) comb. nov.

Discella discoidea Cke. & Peck, 28th Rep't N. Y. State Mus., p. 58, pl. 1, fig. 34–37. 1876.
Discula peckiana Sacc. Syll. Fung., 3:675. 1884.

On dead branches of Carpinus caroliniana. Greenbush. Dr C. H. Peck, 1875. Type.

Fomitiporia laminata Murrill

On dead branches of the nine-bark (Opulaster opulifolius (L.) Kuntze). Albany. H. D. House, October, 1919. Determined by Dr W. A. Murrill. In some cases extending up and down the dead limbs for several inches. Pores stuffed and so minute as to be scarcely discernible to the naked eye. At the base of the

same limbs were also found a few semipileated specimens of Fomes conchatus (Pers.) Gill. (Pyropolyporus conchatus Murrill).

Gloeosporium venetum Speg.

On canes of the cultivated "Snyder variety" of blackberry, near Schenectady. Theodore B. Clausen.

The macroscopic appearance of the disease resembles that caused by Gloeosporium phaeosporum (see Peck, Mus. Bul. 67, p. 29), but the spores are smaller and match the measurements for G. venetum (7–8 x 2–2.5 micr.). The latter, however, is said to occur upon the leaves of Rubus. Dr F. C. Stewart, to whom the material was referred, states that it can be referred to G. venetum only provisionally, and by spore size alone.

Hypocrea pallida E. & E.

On bark of Fagus grandifolia Ehrh. Star Lake, St Lawrence county. Dr C. H. Peck, 1907. Determined by Dr F. J. Seaver. Reported by Doctor Peck (Mus. Bul. 122, p. 22. 1908), as Hypocrea polyporoidea B. & C.

Hymenochaete badio-ferruginea (Mont.)

Indian Lake, Hamilton county, Dr C. H. Peck. Determined by Dr E. A. Burt.

Hypochnus atroruber (Peck) Burt

Syracuse. L. M. Underwood, No. 40, 1886. Mount Tom, Massachusetts, Harkness. Type. Determined by Dr E. A. Burt.

Hypochnus isabellinus Fr.

Ray Brook, on Acer saccharum, Dr C. H. Peck. North Greenbush, Dr C. H. Peck. Fine, St Lawrence county, on decayed and decorticated wood of spruce, Dr C. H. Peck. Bergen, Genesee county, on wood of Tilia americana, Dr C. H. Peck. Determined by Dr E. A. Burt.

Hypochnus pallidofulvus (Peck) Burt

(Zygodesmus pallidofulvus *Peck.* H. subferrugineus *Burt*)

Lyndonville, Orleans county, Fairman. Type. Sylvan Beach, Oneida county, on decayed oak, H. D. House, October 12, 1915. Karner, Albany county, on fallen limbs of chestnut, H. D. House, October 28, 1916. Determined by Dr E. A. Burt.

Hysterium thujae (Roberge) comb. nov.

(H. pinastri var thujae *Roberge*)

On dead and languishing, fallen twigs of Arbor vitae, Thuja occidentalis L. Fourth lake, Herkimer county, H. D. House, August 8, 1919. Also collected by Doctor Peck at North Elba, on the same host.

Lachnea coprinaria Cooke

On cow dung. Piseco, Hamilton county. Dr C. H. Peck. Determined by Dr F. J. Seaver.

Lophodermium exaridium Cke. & Peck

On leaves of Kalmia angustifolia. Near Fourth lake, Herkimer county. H. D. House, August 14, 1919. Associated with Sphaerella colorata Peck.

Microdiplodia populi Dearness, sp. nov.

Pycnidia black, rugose, shining, semi-immersed in the gray, weathered surface of the wood, conic, 75–100 micr. in diameter; ostiola short but distinct, pertuse; spores smoky brown, uniseptate, 7–9 x 3–4 micr.

On decorticated weathered wood of Populus sp., La Junta, Colorado. C. J. Pringle, No. 7, March 29, 1881. Type in the herbarium of the New York State Museum.

Merulius terrestris (Peck) Burt

Near Albany, on and beneath much decayed coniferous wood. H. D. House, October 15, 1919. Determined by Dr E. A. Burt.

Originally described from Michigan as a variety of M. lacrymans, and since found in Vermont, Massachusetts and Nebraska (Burt, Ann. Missouri Bot. Gard. 4: 346–47. 1917.

Nectria sulphurea (Ell. & Calk.) Sacc.

On an old decayed Agaric. Mechanicville, Saratoga county. Dr C. H. Peck. Determined by Dr F. J. Seaver.

Nigredo houstoniata (Schw.) J. Sheldon

On leaves of Houstonia longifolia. Glenmont, Albany county. H. D. House, May 23, 1919.

Nummularia nummularia (Bul.) comb. nov.

Hypoxylon nummularium Bull. Champ. de Franc. t. 468. f. 4. 1789.
Sphaeria nummularia DC. Fl. Fr., 2: 290. 1802.
Sphaeria clypeus Schw. Syn. Fung. Car., No. 42. 1822.
Nummularia bulliardi Tul. Sel. Fung. Carp., 2: 43. t. V. f. 11–19. 1863.
N. clypeus Cooke, Grevillea, 12: 6. 1883.

On dead limbs of Quercus alba. Sylvan Beach, Oneida county. H. D. House, 1915. On Fagus grandifolia. Lyndonville, Orleans county, Fairman.

Patellaria peckii nom. nov.

Tryblidium clavisporum Peck, 35th Ann. Rep't N. Y. State Mus., p. 143.
Patellaria clavispora Sacc. Syll. Fung., 8: 787. 1889. Not Berk. & Br.

On decorticated wood of Salix nigra. Albany, Dr C. H. Peck. Type.

Phialea scutula (Pers.) Gill.

On dead stems of Polymnia canadensis L. Bergen swamp, Genesee county. H. D. House, 1918. Determined by Dr F. J. Seaver.

Peniophora carnosa Burt

Hague, Warren county, on Juniperus virginiana var. depressa Pursh. Dr C. H. Peck, September 19, 1900. Determined by Dr E. A. Burt.

Peniophora greschickii Bres.

On bark of Arbor vitae, Thuja occidentalis L. North River, Warren county. Dr C. H. Peck, September 27, 1911. Determined by Dr E. A. Burt.

Peniophora subincarnata (Peck) Burt

On decayed wood of spruce, Floodwood, Franklin county, and Cascade, Essex county. Dr C. H. Peck. Determined by Dr E. A. Burt.

Peniophora gigantea (Fr.) Cooke

On wood of pine. Mechanicville, Saratoga county. Dr C. H. Peck. Determined by Dr E. A. Burt.

Peniophora globifera E. & E.

On spruce. Slope of Mount McIntyre. Dr C. H. Peck. Determined by Dr E. A. Burt.

Peniophora heterocystidia Burt

On Carpinus caroliniana. Snyder's. Dr C. H. Peck. Determined by Dr E. A. Burt.

Phyllachora panici (Schw.) Sacc.

On leaves of Panicum clandestinum. South Bay, Madison county. H. D. House, September 5, 1919. Other collections in the State herbarium are on Panicum dichotomum, latifolium, virgatum and wrightianum.

Phlyctaena complanata (B. & C.)

On dead stems of Polygonum virginicum L. Oneida, Madison county. H. D. House, May 20, 1918.

Phyllosticta steironematis Dearness & House

On living leaves of Steironema ciliata (L.) Raf. Sylvan Beach, Oneida county. H. D. House, August 30, 1918.

Scolocotrichum graminis Fckl.

On living and languishing leaves of Orchard grass, Dactylis glomerata L. Oneida, Madison county. H. D. House, July 17, 1918.

Pyrenopeziza artemisiae (Lasch) Sacc.

On dead stems of Lactuca hirsuta. Oneida, Madison county. H. D. House, July 18, 1918. Determined by Dr F. J. Seaver.

Puccinia commutata Sydow

(Allodus commutata (Syd.) *Arthur*)

On leaves and stems of Valeriana uliginosa (T. & G.) Rydb. Bonaparte swamp, Lewis county. H. D. House, June 14, 1919. This is the second station in this State for this rare rust, it having been found in 1918, near Jordanville, Herkimer county.

Puccinia curtipes Howe

On leaves of Saxifraga virginensis. Lake Bonaparte, Lewis county. H. D. House, June 15, 1919.

Puccinia trientalis (Tranz.) comb. nov.

Aecidium trientalis Traz. Gobi Rostp. S. Petersb. 116. 1891; Zeitschr. Pflanzenkr. 103. 1892.
Puccinia karelica Tranz. Centralbl. fr. Bakter. u. Parass. II Abt. 11: 106. 1903. Type from Russia on Carex limosa.

The telial stage of this rust has been identified in New York by Doctor Arthur, upon the following hosts: Carex limosa, C. paupercula, C. canescens and C. diandra. The aecial

stage on Trientalis borealis, was first collected in this State by S. H. Burnham, in the East Lake George marshes. It was found rather abundantly during 1919 at Bonaparte swamp, northern Lewis county, the aecial stage on Trientalis borealis Raf., and the telial stage on Carex paupercula Michx.

Pezicula carpinea (Pers.) Tul.

On dead limbs of Carpinus caroliniana. Fish Creek, Oneida county. H. D. House, July 18, 1918.

Polythelis thalictri (Chev.) Arthur

(Puccinia thalictri *Chev.*)

On leaves of Thalictrum dioicum. Little Falls, Herkimer county. H. D. House, June 10, 1919. Other collections of this rust from New York are: Fishkill mountain, Petersburg, Central Bridge, Bethlehem and Karner, Dr C. H. Peck. Buffalo, Clinton. Syracuse, Underwood. Irondequoit, Monroe county, House.

Septoria increscens Peck

Averill Park, Rensselaer county, on leaves of Trientalis borealis. H. D. House, June 23, 1919. Vernon, Oneida county, H. D. House, June 11, 1919. Several other collections from various parts of the State, in the state herbarium, on this host, indicate that it is a rather common species.

Septoria nabali B. & C.

On leaves of Nabalus altissimus (L.) Hook. Vernon, Oneida county, H. D. House, June 11, 1919. It has also been collected at Jamesville, Onondaga county (House, 1915) and by Doctor Peck at Sandlake and Boreas River.

Septoria scutellariae Thum.

On living leaves of Scutellaria lateriflora L. Fourth lake, Herkimer county. H. D. House, August 11, 1919.

Togninia transversa (Sacc. & Fairm.) House. comb nov.

Erostella transversa Sacc. & Fairm. Jour. Myc. 12:48. 1906

On bark of Betula, sp. Lyndonville, Orleans county. Fairman, September 1905.

Erostella, a subgenus of Calosphaeria (Sacc. Syll., 1: 101. 1882), was raised to generic rank by Traverso (Fl. Ital. Crypt.

Fungi Pyren. fasc., 1, 155. 1906.) As a generic name for this group, Togninia Berl. (Icon. Fung., 3:9. 1900) must take precedence. One other species, **Togninia cornicola** (E. & E.) Berl. (Calosphaeria cornicola E. & E.) has been collected in this State on Cornus paniculata, at Bethlehem by Doctor Peck.

Vermicularia peckii Sacc.

On leaves of Trillium undulatum. Averill Park, Rensselaer county. H. D. House, June 23, 1919.

Vermicularia violae-rotundifoliae (Sacc.) House

On leaves of Viola rotundifolia. Little Falls. H. D. House, June 10, 1919. Other collections are Sandlake, Peck; Taberg, Peck, House; North Elba, Essex county, Peck.

Uredinopsis mirabilis (Peck) Magn.

On living and languishing fronds of Woodwardia virginica. Sylvan Beach, Oneida county, H. D. House, August 29, 1918. Also the same locality on fronds of Onoclea sensibilis, and on Onoclea at South Bay, Madison county.

AN INDEX TO THE NEW YORK SPECIES OF MYCOSPHAERELLA

The genus Mycosphaerella Johans. (Kongl. Vet.-Akad. Forhandlinger, 9:163. 1884), must apparently replace the older and well-known name Sphaerella Ces. & DeNot. (Schema Sfer. Ital. 62. 1863) which is invalidated by the algal generic name Sphaerella Sommerfelt (1824). The following list is based upon material in the state herbarium.

1 **Mycosphaerella ailanthi** (Ell. & Barth)
Sphaerella ailanthi Ell. & Barth
Dead branches of Ailanthus glandulosa Desf. Albany (*House*, 1915).

2 **Mycosphaerella alnicola** (Peck)
Sphaerella alnicola Peck
Dead leaves of Alnus viridis, Mt Marcy, *Peck*, type. Lower Ausable, *Peck*.

3 **Mycosphaerella altera** (Pass.)
Sphaerella altera Pass.
On dead stems of Equisetum hyemale, Karner, Albany county, *Peck*.

4 **Mycosphaerella arbutifoliae** (Peck)
Sphaerella arbutifoliae Peck
On fallen leaves of Aronia arbutifolia, Karner, *Peck*, type. Fallen leaves of A. melanocarpa, Karner, *House*.

5 **Mycosphaerella asterinoides** (E. & E.) Fairman
On dead stems of Dipsacus sylvestris. Lyndonville, *Fairman;* Clyde, *O. F. Cook*.

6 **Mycosphaerella berberidis** Awd.
On fallen leaves of Berberis thunbergii, cultv. Lyndonville, *Fairman* (Ann. Myc., 8: 330. 1910).

7 **Mycosphaerella chimaphilina** (Peck)
Sphaerella chimaphilae Peck, not E. & E.; Sphaerella chimaphilina Peck; Sacc.
On fallen leaves of Chimaphila umbellata, Cooperstown Junction, *Peck*, type.

8 **Mycosphaerella ciliata** (E. & E.)
Sphaerella ciliata E. & E.
On dead stems of Steironema ciliata, Sylvan Beach, Oneida county, *House*, 1915.

9 **Mycosphaerella citrullina.** (C. O. Smith) Grossenbacher.
Sphaerella citrullina C. O. Smith. Pycnidial stage said to be Diplodina citrullina. On stems of Cucumeris melonis, C. sativus and Citrullus vulgaris.

10 **Mycosphaerella clintoniana.**
Sphaerella rhododendri Cke., Jour. Bot. 108. 1883, not DeNot. Sphaerella clintoniana House, N. Y. State Mus. Bul. 205–206, p. 40. 1919.
On fallen leaves of Rhododendron maximum. Buffalo, *Clinton*.

11 **Mycosphaerella colorata** (Peck)
Sphaerella colorata Peck
On living and languishing leaves of Kalmia angustifolia. Karner, *Peck*, Type; Averyville swamp, Peck; Grassy pond, *Peck*. Pecksport, *House;* Fourth lake, Herkimer county, *House*.

12 **Mycosphaerella conigena** (Peck)
Sphaerella conigena Peck 33d Rep't N. Y. State Mus. p. 34. 1880. Sphaerella conicola Peck; Sacc. in Syll. Add. 1–4: 75. 1886.

On cone scales of Thuja occidentalis. Helderberg mountains, *Peck,* 1879, type. Elizabethtown, Essex county, *Peck.*

13 **Mycosphaerella coptis** (Schw.)
Sphaeria coptis Schw. Sphaerella coptis Farlow, Appalachia 3:247. 1884.
On languishing leaves of Coptis trifolia. Fourth lake, Herkimer county, *House.*

14 **Mycosporella cruris-galli** (Ell. & Kellerm.) Lindau.
Sphaerella cruris-galli Ell. & Kellerm.
On dead leaves of Trideus flavor (L.) Hitchcock. Wading River, *Peck.*

15 **Mycosphaerella cypripedii** (Peck)
Sphaerella cypripedii Peck
On leaves of Cypripedium insigne, cultv. Bay Ridge, N. Y. *F. C. Stewart,* type.

16 **Mycosphaerella depressa** (Peck)
Sphaerella depressa Peck
On dead stems of Lactuca, sp. Karner, *Peck,* type.

17 **Mycosphaerella fragariae** (Tul.) Johans. & Magn.
Sphaeria fragariae Tul. 1856; Stigmatea fragariae Tul. 1863; Ramularia tulasnei Sacc. 1879; Ramularia fragariae Peck, 1883.
Common on leaves of Fragaria vesca, F. virginica, F. americana.

18 **Mycosphaerella effigurata** (Schw.)
Sphaeria effigurata Schw., Sphaerella effigurata Cke., Sphaerella fraxinea Peck.
On fallen leaves of Fraxinus americana. New Baltimore, Helderberg mountains, Guilderland and Greenbush, *Peck.*

19 **Mycosphaerella fraxinicola** (Schw.)
Sphaeria fraxinicola Schw., Sphaerella fraxinicola Cooke.
On fallen leaves of Fraxinus americana. Bethlehem, Albany county, *Peck.*

20 **Mycosphaerella gaultheriae** (C. & R.)
Sphaerella gaultheriae C. & R.
On leaves of Gaultheria procumbens. Albany, *House;* Karner, *Peck.*

21 **Mycosphaerella ilicella** (Cooke)
Sphaerella ilicella Cooke. - Feb'y 1904
On leaves of Ilex opaca (*Gerard,* Grevillea 8:119)

22 **Mycosphaerella impatientis** (Peck)
Sphaerella impatientis Peck.

On living and languishing leaves of Impatiens fulva, Buffalo, *Clinton*, type. Lakeport, *Peck*. Adirondack mountains, *Peck* (Thum. M. U. No. 963).

23 **Mycosphaerella indistincta** (Peck) Lindau.
Sphaerella indistincta Peck

On dead fronds of Pteris aquilina. Hunter, Greene county, Lake Pleasant, Hamilton county and Karner, Albany county, *Peck*.

24 **Mycosphaerella lycopodii** (Peck)
Sphaerella lycopdii Peck

On leaves and sporophylls of the strobili of Lycopodium clavatum. Aiden Lair, Essex county, *Peck*, type.

25 **Mycosphaerella macularis** (Fr.) Schroter.
Sphaeria macularis Fr. Sphaerella macularis Sacc.

On fallen leaves of Populus tremuloides. Adirondack mountains, *Peck*.

26 **Mycosphaerella maculiformis** (Pers.) Johans. & Magn.
Sphaeria maculiformis Pers. Sphaerella maculiformis Auersw. Sphaerella oblivia, arcana, & simulans Cooke

On fallen leaves of Hicoria alba, Bethlehem, *Peck*. Fallen leaves of Castanea dentata, Portage, *Clinton;* North Greenbush, *Peck;* New Scotland, *Peck*. Fallen leaves of Quercus acuminata, North Greenbush, *Peck*. Fallen leaves of Amelanchier canadensis, Karner, *Peck*.

27 **Mycosphaerella opuntiae** (E. & E.) Dearness.
Sphaerella opuntiae E. & E.

On dead and languishing sections of Opuntia opuntia (L.) Coulter. Long Island, *Peck*.

28 **Mycosphaerella orbicularis** (Peck)
Sphaerella orbicularis Peck

On upper surface of fallen leaves of Populus grandidentata, Karner, *Peck*, type.

29 **Mycosphaerella perparva** (Sacc.)
Sphaerella minutissima. Peck, not West. Sphaerella perparva Sacc.
On dead leaves of Alnus incana, hanging on tree, Marcy landing, Essex county, *Peck*, type. On fallen leaves of Alnus viridis, Marcy trail, Essex county, *Peck*.

30 **Mycosphaerella pinsapo** (Thum.)
Sphaerella pinsapo Thum.
On fallen leaf-twigs of Thuja occidentalis. Port Henry, *Peck*.

30 **Mycosphaerella plantaginicola** (Schw.) Dearness. p. 38
Sphaeria plantaginicola Schw.
On languishing leaves of Plantago major. New London, Oneida county, *House*, 1918.

32 **Mycosphaerella pontedereae** (Peck)
Sphaerella pontedereae Peck. Sphaerella paludosa E. & E.
On leaves of Pontederia cordata. Whitehall, *Peck*, type. On leaves of Nymphaea advena. Hempstead, Long Island, *House*.

33 **Mycosphaerella populifolia** (Cooke)
Sphaerella populifolia Cooke
On fallen leaves of Populus balsamifera. North Elba, *Peck*.

34 **Mycosphaerella populnea** (Sacc.)
Sphaerella populnea Sacc. Ann. Myc., 13:115. 1915. On leaves of Populus balsamifera. Tupper Lake, *House*, 1913.

35 **Mycosphaerella punctiformis** (Pers.) Johans.
Sphaeria punctiformis Pers. Sphaerella sparsa (Wallr.) Auersw. Sphaerella punctiformis Rabh.
On fallen leaves of:
Acer saccharum, Helderberg mountains, *Peck*.
Betula lenta, Spruce pond, Essex county, *Peck*.
Betula lutea, Angola, *Clinton*.
Castanea dentata, North Greenbush, *Peck*.

Fagus grandifolia, Helderberg mountains, *Peck.* Sandlake, *Peck.* Grassy pond, Essex county, *Peck.* Buffalo, *Clinton.*
Quercus prinus, North Greenbush, *Peck.*
Quercus alba, North Greenbush, *Peck.*
Tilia americana, Buffalo, *Clinton.*
Vitis aestivalis, North Greenbush, *Peck.*

36 **Mycosphaerella recutita** (Fr.) Johans.
Sphaerella recutita Fr.
On leaves of Carex varia. West Troy, *Peck.*

37 **Mycosphaerella rubina** (Peck).
Sphaerella rubina *Peck*
On canes of Rubus Idaeus, cultv. Menands, *Peck,* type. Marlboro, Ulster county, *Peck.*

38 **Mycosphaerella sarraceniae** (Schw.)
Sphaeria sarraceniae Schw. Sphaerella sarraceniae Sacc.
On dead leaves of Sarracenia purpurea L. Sandlake, *Peck.* On dead flowering scapes of same host, Pecksport, Madison county, *House.*

39 **Mycosphaerella septorioides** (Desm.) Lindau.
Sphaeria septorioides Desm. Sphaerella septorioides Niessel.
On leaves of Acer saccharum.

40 **Mycosphaerella spleniata** (Cke. & Peck)
Sphaerella spleniata Cooke & Peck. Sphaerella nigrita Cooke.
On fallen leaves of: Quercus bicolor, North Greenbush, *Peck;* Sandlake, *Peck;* Montezuma, *Peck.* Quercus alba, Poughkeepsie, *Gerard;* Karner, *Peck;* Albany, *Peck.* Quercus prinoides, Albany, *Peck.* Quercus prinus, Greenbush, *Peck.*

41 **Mycosphaerella thalictri** (E. & E.) Lindau.
Sphaerella thalictricola Sacc. Sphaerella septorioides Peck, not Niessl. Sphaerella thalictri E. & E.
On living leaves of Thalictrum dioicum. Central Bridge, *Peck.* Canajoharie, *Peck.*

42 **Mycosphaerella tsugae**

Sphaerella conigena Peck, 38th Rep't, p. 104. 1885, not Peck, 33d Rep't, 1880. Sphaerella peckii Sacc. Syll., 9:649. 1891, not Speg. 1880. Sphaerella conicola Sacc.; E. & E. N. Am. Pyren. 279, not Sacc. Syll. Add., 1–4:75. 1886, which is on Thuja (M. conigena). Mycosphaerella peckii Lindau, in E. & P. Nat. Pflanzenfam., 1:pt 1, 425. 1897. S. tsugae House.

On fallen cones of Tsuga canadensis. Helderberg mountains and Knowersville, Albany county, *Peck.*

43 **Mycosphaerella typhae** (Lasch) Lindau

On dead leaves of Typha latifolia L., Carlisle and Greenbush, Peck. (Reported as Sphaerella (Sphaeria) typhae Schw).

44 **Mycosphaerella ulmi** (Fr.) Kleb. Zeit. f. Pflanzenkr. 12:257. 1902. (Septoria ulmi Fr. 1819. Phleospora ulmi Wallr. 1833. Spermogonial stage of Phyllachora ulmi (Duv.) Fckl.

On leaves of Ulmus fulva, Catskill mountains, *Peck;* New Baltimore, *Howe.* Ulmus montana, Bethlehem, *Peck.* Ulmus americana, Menands, *Peck.*

45 **Mycosphaerella vaccinii** (Cooke) Schroter.

Sphaerella vaccinii Cooke. Sphaerella myrtillii Auersw.

On fallen leaves of Vaccinium uliginosum. Mount Marcy, *Peck.* Fallen leaves of Vaccinium corymbosum. Spruce pond, Essex county, *Peck* (Sphaerella vaccinii var. corymbosi Sacc., Nuovo Giorn. Bot. Ital., 23:No. 2, p. 5. 1916.)

46 **Mycosphaerella verbascicola** (Schw.) Fairman.

Sphaeria verbascicola Schw. Sphaerella verbascicola E. & E.

Dead stems of Verbascum thapsus L. Orleans county, *Fairman.*

47 **Mycosphaerella weigeliae** Fairman, Ann. Myc., 8:326. 1910. Sphaerella weigeliae Sacc. & Trott.; Sacc. Syll., 22:137. 1913.

On fallen leaves of Weigelia rosea, cultv. Lyndonville, Orleans county, *Fairman.*

NEW OR NOTEWORTHY SPECIES OF FUNGI II

BY

JOHN DEARNESS *and* HOMER D. HOUSE

Of the species of fungi mentioned in the following pages, 42 are new to the state flora and of them 14 are described here as new species. The new species are:

Diaporthe menispermi
" triostei
Didymella agrostidis
Gloeosporium acutiloba
Gnomoniopsis acerophila
Leptosphaeria collinsoniae
Leptothyrium conspicuum
Phomopsis impatientis
Rhabdospora ambrosiae
Saccardinula alni
Septoria acetosellae
" hieracicola
Stagonospora meliloti
Venturia fimbriata

Among the species previously described, the following are recorded here for the first time for this State:

Ascochyta thaspii E. & E.
Cercospora epigaea Ell. & Dearn.
" cypripedii Ell. & Dearn.
Diaporthe aceris Fckl.
" celastrina Ell. & Barth.
Didymella superflua (Fckl.)
Dermatea lobata Ell.
Gloeosporium paludosum Ell. & Galloway
Hypoxylon transversum (Schw.) Sacc.
Hendersonia linderae Sacc.
Dendrophoma pruinosa (Fr.) Sacc.
Leptostromella scirpina Peck.
Marsonia lonicerae Harkness
Metasphaeria aulica (C. & E.) Sacc.
Microthyrium microscopicum Desm.
Mycosphaerella plantaginicola (Schw.) Dearness
Phoma dulcamarina Sacc.
Ramularia montana (Speg.) Sacc.
Sphaeropsis hyalina B. & C.
" staphylaea Brum.
" foliicola Berl. & Roum.
Septoria hydrophylli Ell. & Dearn.
" vincae Desm.
" leptostachyae Ell. & Kellerm.
" flagellaris E. & E.
Solenia poriaeformis (DC.) Fckl.
Stagonospora collapsa (C. & E.) Sacc.

The following species are not new to the State but are recorded because of their occurrence upon new hosts or being otherwise critical:

Cercospora ziziae E. & E.
Alternaria tenuis Nees
Gnomonia petiolophila (Peck) Berl. & Vogl.
Lophodermium petiolicolum Fckl.

Periconia pycnospora Fres.
Pleospora herbarum (Pers.) Rabh.
Venturia cassandrae Peck
" kalmiae Peck

Alternaria tenuis Nees

Attacking and killing the marginal and terminal tissues of leaves of the wild bean, Glycine apios L. (Apios tuberosa). Long Pond, Monroe county, August 22, 1918. H. D. House.

Ascochyta thaspii E. & E.

On living leaves of Thaspium barbinode. Trenton Falls, August 25, 1918. H. D. House.

Cercospora cypripedii Ell. & Dearn.

On living and languishing leaves of the showy lady's-slipper Cypripedium reginae Walt. Castle swamp, Oneida, Madison county, August 27, 1918. H. D. House.

Cercospora epigaeae Ell. & Dearn.

On languishing leaves of the trailing arbutus, Epigaea repens L., in the pine plains north of New London, Oneida county, June 17, 1918. H. D. House. At the same place, August 27, 1918 (material rather old), and at North Bay, Oneida county, June 17, 1918.

Cercospora ziziae E. & E.

On living leaves of Thaspium barbinode (Michx.) Nutt. Trenton Falls, Oneida county, August 25, 1918. H. D. House. The only other collection of this in the state herbarium was made on this host and at the same locality several years ago by Doctor Peck.

Dendrophoma pruinosa (Fr.) Sacc.

On dead twigs of black ash, Fraxinus nigra Marsh. Oneida. Madison county, July 8, 1918. H. D. House.

Dermatea lobata Ell.

On dead twigs of white oak, Quercus alba L., Islip, Long Island, May 24, 1895. Dr C. H. Peck. The specimen possesses thick paraphyses and sporidia 11–13 x 8–9 μ

Diaporthe aceris Fckl.

On fallen trunk of red maple, Acer rubrum L., Sylvan Beach, Oneida county, May 16, 1918. H. D. House.

Diaporthe celastrina Ell. & Barth.

On dead stems of Celastrus scandens L., Oneida, Madison county, May 15, 1918. H. D. House.

Diaporthe menispermi Dearness & House, sp. nov.

Stromata scattered on the dead stems, two or three perithecia in a stroma, sunk in the wood and raising the epidermis into minute pustules, 300 to 350 micr. in diameter, contents gray; ostiola cylindrical, crateriform, 60–70 μ across, emerging through a black disk very slightly above the uncolored epidermis. Asci paraphysate, fusoid, mostly about 45 x 7 μ. Sporidia hyaline, 1-septate, subbiseriate, sometimes 2-nucleate, oblong-elliptic, obtuse at the ends, 10–11 x 3½ μ.

On dead stems of Menispermum canadense L., Albany, N. Y., May 18, 1917. H. D. House. Type in the New York State Museum herbarium. The same collection contains some material of Sphaeropsis menispermi Peck.

Diaporthe triostei Dearness & House, sp. nov.

Perithecia single or mostly in small groups of two to nine; 130 to 225 micr. in diameter, chiefly about 180 micr. developed immediately under the cuticle, staining the surface of the xylem but not penetrating it or marking it in any way. Ostiola black, shining, sharply conical, minute piercing the cuticle so briefly as to be hardly perceptible to the touch. Asci spindleform, acute at both ends, 30–35 x 7–8 μ, rather scantily paraphysate. Sporidia hyaline, straight or nearly so, gradually acute at both ends, 1-septate, not constricted, 4-nucleate, 12–15 x 2½ μ.

On dead stems of Triosteum aurantiacum Bicknell. Glenmont, Albany county, May 15, 1919. H. D. House. Type in the New York State Museum herbarium.

Didymella agrostidis Dearness & House, sp. nov.

Perithecia scattered, immersed with only the firm ostiola erumpent, consisting of comparatively large brown cells; depressed hemisphaeric

to subglobose, 250 to 350 micr. in diameter. Asci clavate, rounded at the top gelatinous walls 3–6 μ thick 100 to 140 μ long, the longest one observed exceeding 150 μ in length, about 15 μ near the top and gradually narrowing to an acute, short-stipitate base, long paraphysate. Sporidia hyaline, 1-septate, somewhat constricted, subacute at each end, biseriate to congested near the upper end of the ascus, uniseriate toward the base, 30–33 x 6–7½ μ.

On dead culms of Agrostis alba L., Albany, N. Y., June 3, 1918. H. D. House. Type in the New York State Museum herbarium.

Didymella superflua (Fckl.) Sacc.

On dead stems of wild cucumber, Micrampelis lobata (Michx.) Greene, Sylvan Beach, Oneida county, June 17, 1918. H. D. House. The Didymella on this collection is somewhat flatter than the description in Saccardo requires, but is otherwise so near that it doubtless belongs in D. superflua.

Gloeosporium acutiloba Dearness & House, sp. nov.

Acervuli innate, large, .2 to .5 mm broad, visible from both sides of the leaf but more distinct on the lower surface, on large arid areas. Spores hyaline, oblong 4–8 x 2–2½ μ mostly 7 x 2 μ, nucleate at each end.

On languishing leaves of Hepatica acutiloba DC. Jamesville, Onondaga county, July 11, 1918. H. D. House. Type in the New York State Museum herbarium.

Other leaves in the same collection contained Gloeosporium hepaticae Peck, which has smaller epiphyllous acervuli and large, cylindrical, 4-nucleate spores.

Gloeosporium paludosum Ell. & Galloway.

On living and languishing leaves of Peltandra virginica (L.) Kunth. Sylvan Beach, Oneida county, August 29, 1918. H. D. House.

Gnomonia petiolophila (Peck) Berl. & Vogl.

On fallen dead petioles of sugar maple, Acer saccharum Marsh. Oneida, Madison county, May 15, 1918. H. D. House. Originally collected on fallen petioles of Acer spicatum in the Adirondack mountains by Doctor Peck, and more recently on the same host at Albany (House).

Gnomoniopsis acerophila Dearness & House, sp. nov.

Perithecia under and entirely covered by the epidermis except the subulate ostiola, not at all or but slightly raising the cuticle; depressed globose, curling-stone shaped, .6 to .8 mm in diameter; ostiola acuminate, .75 to 1 mm long, the tip hyaline for a distance of 180 to 200 micr. Asci lacking paraphyses, rather variable in shape, from that of a wide short sheaf to long cylindric, 33 x 23 μ to 90 x 8 μ, mostly obliquely saccate. Sporidia hyaline, parallel-congregate to biseriate, mostly 3 to 5 in the upper part of the ascus and overlapping the others in the lower half, 1–5 septate, 24–30 x 3 1/2–4 μ.

On petioles of fallen leaves of the striped maple, Acer pennsylvanicum L. Oneida, Madison county, May 15, 1918. H. D. House. Type in the New York State Museum herbarium.

Hendersonia linderae Sacc.

On dead branches of the spicebush, Benzoin aestivale (L.) Nees. Oneida, Madison county, May 15, 1918. H. D. House. The same collection contains in addition to the Hendersonia, two species of Diplodia, namely, Diplodia linderae E. & E., and the other possibly Diplodia insitiva Sacc. Saccardo in publishing the latter did not give the measurements and although cotype material is available for comparison, it is a mixed lot and one can not be sure just what was described by Saccardo. There was also present a little material of Valsaria insitiva var.

Hypoxylon transversum (Schw.) Sacc.

On dead limbs of yellow birch, Betula lutea Michx.f. Chittenango Falls, Madison county, May 17, 1918. H. D. House.

Leptosphaeria collinsoniae Dearness & House, sp. nov.

Perithecia scattered, gradually blackening the stems, covered by the cuticle, finally bare, globose-conic, rugose, papillate, 270 to 350 micr. in diameter; ostiola cylindrical, merely piercing the cuticle. Asci terete, short-stipitate, 60–105 μ, mostly about 75 x 10 μ; paraphyses linear, longer than the asci. Sporidia amber colored, biseriate, straight or nearly so, widest in the middle, not constricted at the septa, gradually narrowing to the subacute ends, 5–8-septate, mostly 6-nucleate, 28–35, mostly 30–32 x 4 μ.

On dead, usually more or less blackened stems of the stone root, Collinsonia canadensis L. Oneida, Madison county,

July 17, 1918. H. D. House. Also collected on same host at North Greenbush, several years ago by Doctor Peck, the material somewhat immature. Obviously related to but differing in several characters from Leptosphaeria acuta (Moug.) Karst.

Leptostromella scirpina Peck

On dead leaves of Scirpus cyperinus (L.) Kunth. Pecksport, Madison county, May 18, 1918. H. D. House. Originally described from Nebraska on Scirpus atrovirens.

The Pecksport material is referred here although there are minor differences. In some of the pycnidia the spores are obtuse at one end and average under 19 micr. in length, but in others they are acute at both ends and reach 25 micr. in length. As a rule these are more orbicular than in the type material collected in Nebraska.

Leptothyrium conspicuum Dearness & House, sp. nov.

Spots reddish brown, irregular, 4 to 25 mm, in some instances extending over the whole leaf, darker above, the small spots definitely limited by a raised reddish border which disappears with the extension of the spot over the leaf. Pycnidia amphigenous, black, gregarious near the center of the spot or scattered over the whole area, circular, flat, subcuticular, becoming somewhat erumpent, rugose, .2 to .3 mm in diameter; conidia hyaline, 3.5–4 x 1 μ, on short basidia.

On living and languishing leaves of Vaccinium vacillans Kalm, near New London, Oneida county, July 20 and August 27, 1918. H. D. House. Type in the New York State Museum herbarium.

Lophodermium petiolicolum Fckl.

On petioles of fallen dead leaves of black cherry, Prunus serotina Ehrh., May 15, 1918, near Oneida, Madison county. H. D. House. The state herbarium contains this fungus on fallen petioles of Acer saccharum, Acer saccharinum, Sorbus americana, Rhus glabra and Fraxinus americana.

Marsonia lonicerae Harkness

On living leaves of swamp honeysuckle, Lonicera oblongifolia (Goldie) Hook. Jordanville, Herkimer county, July 12, 1918. H. D. House. Apparently the first record of this parasitic leaf fungus in the eastern United States.

Metasphaeria aulica (C. & E.) Sacc.

On dead stems of Triosteum aurantiacum Bicknell. Glenmont, Albany county, May 9, 1918. H. D. House. The asci are clavate, 75 to 105 micr. long, narrowly elongate at the base. Sporidia 1–6 septate, mostly 5–septate, 24–28 x 3–4½ μ, constricted at the central septum and widest in the cell immediately above this septum.

Microthyrium microscopicum Desm.

On dead and languishing leaves of Vinca minor L. Chittenango Falls, Madison county, May 17, 1918. H. D. House.

Mycosphaerella plantaginicola (Schw.) Dearness, comb. nov.

(Sphaeria plantaginicola, *Schw.* Syn. N. Am. 1806)

On living leaves of Plantago major L., near New London, Oneida county, September 2, 1918. H. D. House.

On these leaves are very minute, black perithecia containing globose asci, 15 μ in diameter, lacking paraphyses, and with 1–septate sporidia, 8 x 3–3½ μ, which agree very nearly with Schweinitz's "Sphaeria plantaginicola, No. 1806," fructification unknown. In Ellis's list of Schweinitz's Sphaeriae with unknown fructification, he states: "Sphaeria plantaginicola Schw.— perithecia minute, punctiform, black, innate on both sides of the leaf, subconically elevated, astomas, thickly but irregularly scattered, shining, becoming empty, but hard so as to be with difficulty cut." This agrees with the New London collection except the last item and that is true so far as the difficulty of getting the knife upon the perithecia because of their minuteness.

Periconia pycnospora Fres.

On dead stems of Glycine apios L. (Apios tuberosa Moench), Sylvan Beach, Oneida county, August 30, 1918. H. D. House. Recorded in Europe from a number of hosts belonging to widely different families. Two collections by Doctor Peck in the state herbarium do not give the name of the hosts.

Phoma dulcamarina Sacc.

On dead stems of Solanum dulcamara L., near Oneida, Madison county, May 15, 1918. H. D. House.

Phomopsis impatientis Dearness & House, sp. nov.

Pycnidia black, subcuticular, very numerous, circular to subelongate, flattened, 270 to 360 micr.; ostiola, subcircular, short, merely penetrating the cuticle, 50 to 75 μ across. Sporules hyaline, elliptic-oblong, obscurely 2-guttulate, 6–10 x 2–3 μ, mixed in the oozing mass that escapes from the wounded pycnidium with spores of another form, curved or hamate, 15–20 x 1 μ and what appear to be shorter, straight basidia, 5–12 x ½–¾ μ.

On dead stems of Impatiens biflora Walt., Oneida, Madison county, May 15, 1918. H. D. House. Type in the New York State Museum herbarium.

Pleospora herbarum (Pers.) Rabh.

On dead stems of Valeriana uliginosa (T. & G.) Rydb., Jordanville, Herkimer county, July 12, 1918. H. D. House.

Ramularia eamesii Dearness & House, sp. nov.

Maculae red brown, similar on both sides of the leaf, angular, bounded by the veinlets, 2 to 4 mm in width. Fertile hyphae fasciculate, hyaline, hypophyllous, 5–18 μ. Conidia hyaline, continuous or uniseptate, 15–20 x 2½–3 μ.

On living leaves of Valeriana uliginosa (T. & G.) Rydb., Jordanville, Herkimer county, July 12, 1918. H. D. House, Mr and Mrs E. A. Eames. Type in the New York State Museum herbarium.

In nearly all cases those host plants which were badly affected grew in or on the large nests in a sphagnum swamp built up by a species of black ant, and which seems to have affected the vigor of the plants growing on these ant nests. The same host, Valeriana uliginosa, exhibits a rust, Puccinia comutata, new to the eastern United States, and other species of plants growing on the ant nests were variously diseased.

The hyphae and conidia are much smaller than described for Ramularia valerianae Speg. where the conidia are described as reaching 50 x 8 μ.

Ramularia montana (Speg.) Sacc.

On languishing leaves of Epilobium adenocaulon Haussk., Blue Mountain Lake, August 1887. Dr C. H. Peck. The collection although scanty is in good condition and contains in addition a rust, Pucciniastrum pustulatum (Pers.) Dietel.

Saccardinula alni Dearness & House, sp. nov.

Perithecia scattered, superficial, membranaceous, black, shining, microthyreaceous, smoothish to salebrose, flattened-conic, inconspicuously perforate, 90 to 270 micr. in diameter. Asci mostly saccate and wider below but various in size, shape and number of sporidia contained, lacking paraphyses, walls 3–4 micr. thick, 30–90 x 12–30 micr., mostly 50–60 x 20–25 micr. Sporidia hyaline, four to eight in each ascus, wider above, sometimes one or two in the upper half of the ascus and the others crowded in the lower half, muriform, 5–7–septate, 20–24 x 6–8 micr.

On bark of Alnus. Stamford, N. Y. Collected several years ago by Dr C. H. Peck. Type in the New York State Museum herbarium.

The species is peculiar in belonging to a genus heretofore represented by a few tropical leaf-inhabiting species.

Septoria acetosella Dearness & House, sp. nov.

Maculae mostly along the edges of the affected leaves; these as well as the interior ones rather indefinite. In most cases the tissues around the affected areas are distinctly greener than the rest of the leaf. Pycnidia scattered, subinnate, epiphyllous, but owing to the thinness of the leaf-blades they are in most of the spots nearly equally visible beneath, 90–100 micr. in diameter. Sporules straight, continuous, 15–30 x ½–1 μ chiefly 18–20 μ long.

On leaves of the wood sorrel, Oxalis acetosella L., Fourth Lake, Herkimer county, August 8, 1919. H. D. House. Type in the New York State Museum herbarium. Also collected at the same place August 8, 1917.

Septoria flagellaris E. & E.

On living leaves of Convolvulus spithamaeus L., sandy fields north of New London, Oneida county, July 20, 1918. H. D. House.

Septoria hieracicola Dearness & House, sp. nov.

Spots red-brown on both sides of the leaf, circular or irregular, having a narrow, raised, concolorous boundary, 2 to 8 mm broad. Pycnidia gregarious near the center of the spots, somewhat darker than the context, mostly epiphyllous, some of the spots having no pycnidia on the lower surface, pustulate, minute, 35 to 60 micr.

in diameter. Conidia hyaline, continuous, straight or curved, 16–30 x .5–.75 μ.

On living leaves of Hieracium paniculatum L. Catskill mountains, August 1880. Dr C. H. Peck. Type in the New York State Museum herbarium.

Septoria hydrophylli Ell. & Dearness

On living and languishing leaves of Virginia waterleaf, Hydrophyllum virginianum L. Oneida, Madison county, May 15, 1918. H. D. House.

Septoria leptostachyae Ell. & Kellerm.

On living leaves of the lopseed, Phyrma leptostachya L. Oneida, Madison county, July 18, 1918. H. D. House.

Septoria vincae Desm.

On living and languishing leaves of Vinca minor L. Chittenango Falls, Madison county, May 17, 1918. H. D. House.

Solenia poriaeformis (DC.) Fckl.

(Peziza pruinata *Schw.*; Tapesia pruinata *Sacc.*; Tapesia poriaeformis *Fckl.*)

On decorticated surface of decayed wood on the ground in damp woods, Oneida, Madison county, September 1, 1918. H. D. House.

Sphaeropsis foliicola Berl. & Roum.

On living leaves of wild thorn, Crataegus sp., Portage. August 15, 1904. Dr C. H. Peck.

Sphaeropsis hyalina B. & C.

(Macrophoma hyalina (*B. & C.*) *Berl. & Vogl.*)

On dead twigs of red ash, Fraxinus pennsylvanica Marsh. Glenmont, Albany county, May 9, 1918. H. D. House.

The collection is interesting because a few pycnidia contain brown spores, and such would have to be referred to Sphaeropsis pennsylvanica B. & C. Many of the spores are quite hyaline, and clearly belong to what is described as Sphaeropsis hyalina. In size they average from 20 to 26 micr. in length, but none were quite 32 micr. long. There is either a mixture of two very closely related species here or else the hyaline spored form eventually matures into a smoky brown spored form in which case, as we suspect, Sphaeropsis hyalina B. & C., and Sphaeropsis pennsylvanica B. & C. are the same. Both were

originally described in Sphaeropsis and if the mature spore is brownish, it is rightly to be called Sphaeropsis hyalina B. & C., the prior name. If further investigation shows beyond doubt that a hyaline spored species (Macrophoma) may develop brownish spores at maturity (Sphaeropsis), it may involve the co-identification of several other species of Macrophoma and Sphaeropsis with identical hosts and similar spore measurements.

Sphaeropsis staphyleae Brun.

On dead twigs of Staphylea trifolia L. Glenmont, Albany county, May 9, 1918. H. D. House. The spores are 21–24 x 10–12 μ. Without authentic European material with which to compare, it is impossible to positively identify this with S. staphyleae Brun., although there is nothing in the description of that species to exclude our material. The same twigs contain an abundance of Hendersonia staphyleae E. & E.

Stagonospora collapsa (C. & E.) Sacc.

On fallen trunk of red maple, Acer rubrum L. Sylvan Beach, Oneida county, May 16, 1918. H. D. House.

Stagonospora meliloti Dearness & House, sp. nov.

Pycnidia thickly scattered on the more or less blackened areas of the stems, subcuticular, depressed hemispheric, 150 to 200 micr. in diameter; ostiola 40–50 μ, central and circular, perforating the cuticle but scarcely roughening it to the touch. Conidia 1–3-septate, hyaline, sides even or slightly curved, rounded at the ends, constricted at the septa, 15–20 x 5–7½ μ, on short and indistinct basidia.

On dead stems of Melilotus alba Desv. Albany, July 1, 1918. H. D. House. Type in the New York State Museum herbarium. Stagonospora desmodii E. & E. has certain characters in common with this, but the spores are quite different. The same stems contain a scanty amount of some Leptosphaeria (L. viridella?).

Venturia cassandrae Peck

On languishing and dead fallen leaves of Andromeda polifolia L. Pecksport, Madison county, July 10, 1918. H. D. House. This form on Andromeda has sporules 16–21 x 4–4½ μ. The species was first collected by Doctor Peck on Chamaedaphne calyculata (L.) Moench, at Kasoag and at Karner. Also on the same host at Pecksport (*House*).

Venturia fimbriata Dearness & House, sp. nov.

Perithecia dark brown, superficial, easily freed from the leaf, scattered over its upper surface, with short bristlelike hairs on the upper half of the perithecia, more or less fimbriate at the base with short or long, septate, branching hyphae, 90 to 180 micr. in diameter and rather higher than broad. Asci subcylindrical, often wider below the middle, sometimes curved, 30–35 x 7–8 μ; paraphyses sparse. Sporidia hyaline, biseriate, uniseptate, elliptic, subacute at each end, 10–11 x 3 μ.

Epiphyllous on languishing leaves of Antennaria, sp. Oneida, Madison county, May 20, 1918. H. D. House. Type in New York State Museum herbarium.

It is not easy to determine whether this should be referred to Venturia or to Asterina, but as the hairs at the top of the perithecia are distinctly bristlelike, it is here referred to Venturia.

Associated on some of the leaves with Septoria mollisia Dearness & House.

Venturia kalmiae Peck

On languishing and fallen leaves of Kalmia polifolia L. Kasoag, Oswego county, June 21, 1918. H. D. House. This is the same locality and host from which the type was collected by Doctor Peck several years ago.

A Correction

The name **Anthostomella picaceum** (C. & E.) Sacc., on page 43, New York State Museum Bulletin 205–206, should read: **Anthostoma picaceum** (C. & E.) Sacc.

STUDIES IN THE GENUS INOCYBE

C. H. KAUFFMAN

1 The Species of Inocybe in Peck's Collections

The genus Inocybe has been partially monographed both in Europe and in the United States. The species of Fries and Quelet, as well as those of older date, have been critically studied in part by Bresadola, Patouillard, Massee and others, and more or less uniform conceptions have been evolved for the European species. A considerable number of species were described from the United States by Doctor Peck, mostly from New York State; but with the exception of these species of Peck, comparatively few had been named in this country

by anyone else up to the time of Doctor Peck's death. Since then, Professor Atkinson (Am. Jour. Bot., 5:210, 1918) published names and descriptions of twenty-five additional new American species, an accumulation of many years.

During an extensive study of American collections toward a more complete monograph of the American species, I had the opportunity, through the kindness of Dr H. D. House, to make a critical examination of all the collections of Inocybe which had accumulated at Albany during Doctor Peck's régime, including of course, types of his species. About 275 collections were gone over; each of these, except in a few cases, must be considered a separate collection. Of these, Doctor Peck himself collected by far the greater part and his own handwriting is present on practically all his own finds. The data of Doctor Peck's own collections are very meager, usually giving no more than the locality, sometimes the county, and the month in which the material was obtained; rarely does he mention the year or the day of the month.[1]

A number of the types and other species from extralimital regions were communicated to him by collectors of fungi living in other states. Simon Davis sent material from Massachusetts; Dr N. M. Glatfelter, from St Louis, Mo.; F. J. Braendle, from the District of Columbia; J. M. Macoun, from Ottawa, Canada; B. O. Longyear, from Michigan; Baker, from California; and Morgan, from Ohio. Only a few other donors sent Inocybe material from outside the State.

In 1910, as a part of the New York State Museum Bulletin 139, Doctor Peck got together an account of the New York species of Inocybe, which is in the main a compilation of the scattered descriptions and commentaries of previous State Botanist's reports. I shall refer to this hereinafter as Peck's Monograph. In going over the collections, it soon became evident to me that Doctor Peck had not attempted to base the monograph on all his collections but had carefully examined selected packets, many of which belonged to the type collections, a part of which in each case was mounted on sheets. At least such a set of packets has been kept together and apart from

[1] In the case of type specimens, and species reported for the first time, the year can be ascertained by reference to the published description or report, since Doctor Peck appears rarely to have reported or described a species later than in the report for the year in which the specimen was collected. In other cases his collections can be checked up with his voluminous notes, occupying over forty large notebooks and the exact year of collection determined. *H. D. House*

the general collection, and these I found to agree with the conceptions of the species as given in the monograph.

The rest of the collections, although the packets were, with few exceptions, marked with the name of a species of Inocybe, were found to be in considerable confusion. It should be remembered at this point, that this is inevitably to be expected under the circumstances, and does not, in my opinion, reflect in the slightest on the perspicacity of Doctor Peck. He had many duties as State Botanist; in the earlier years of his collecting, accurate microscopical information on European species was practically lacking; later, the accumulations of any season, his own and those from many parts of the country, naturally made it impossible to go back over all former collections and keep them revised to date. It would have been possible in dealing with the genus Inocybe alone, but impossible in the whole field of fungi, to say nothing of the plant kingdom as a whole. It is not surprising, then, to find that, for example, many packets marked *Inocybe subochracea* Pk., did not contain that species at all, but on examination were found to be scattered over half a dozen other species. A glance in the microscope was sufficient to show that no cystidia were present in some instances, or that the spores were angular in others. This shows, I think, that Doctor Peck did either not at first realize the importance of cystidia as he did later, or that he found it impracticable to examine microscopically the mass of collected material, and wishing to preserve it, depended on his undoubted wonderful memory to decide the species from external characters alone.

The dried herbarium specimens of the species of this genus are far more easily and satisfactorily diagnosed than is usually the case in dried Agarics. This is due to a number of sharply defined microscopic morphological characters which persist in the dried plants. Since these characters are fundamental with regard to the relationships of the species in the genus, their study should give us a better clue to such relationships and mark a step toward a phylogenetic system of the Agarics. It seems worth while, then, to present below a scheme based on the microscopical features of the species. This has been arrived at, not only by the study of the Albany collections, but of those in the New York Botanical Garden, my own collections, the published descriptions of Professor Atkinson, those from the collections at several universities, and especially the extensive collections of Simon Davis of Brookline, Mass. Only the plants in the

Peck collections will be used in this paper to illustrate the proposed arrangement.

The *spores* of the different species of Inocybe are of two main types. In one type the epispore is smooth and rounded. In the other type it is ornamented by spines, nodules, or a more or less tuberculate roughness, which is usually associated with somewhat angular shape. This angularity may be sharply marked or obscure and is somewhat masked by the roughness due to the tubercles. In a very few cases (for example I. decipiens Bres. and I. maritimoides Pk.), the spores are merely angular or with only very slight or few elevations on the surface. The nodules (tubercles meaning practically the same) may be crowded, or, as is frequently the case, scattered on the surface of the spore. Furthermore, they may be coarse and prominent under the ordinary high-power magnifications (that is, without the use of the oil-immersion lenses), or may be indistinct and then best seen by causing the spores to roll over during observation under the microscope.

The *cystidia* are either present or lacking and the species are thus easily grouped into two parts. They may be very numerous or rather thinly scattered over the hymenium and in a few species so few that a very small portion or section of the gills may fail to show any. They may be present all over the surfaces of the gills or mostly on the edge of the gills or near the edge. The latter statement contradicts the statement of Massee (Annals of Botany, 18:462, 1904) in which he claims that "true cystidia are only met with on the surface of the gills." In order to discriminate on the subject, it must be noted that all species of Inocybe develop on the edges of the gills sac-shaped or rounded-clavate, more rarely subacute or capitate cells, which I have designated "*sterile cells*" (Agaricaceae of Michigan, p. 444), and which are shorter than the true cystidia and thin-walled, and probably do not exude the contents through the dissolved apex as generally do the cystidia. Massee calls these cells "*marginal cells.*" In addition to these sterile cells, many species of Inocybe bear typical cystidia on the edge of the gills, while some species have them only on the surfaces, and in the case of a few, like I. paludinella Pk., the edge of the gills is so thickly beset with the genuine thick-walled cystidia that the "sterile cells" are almost always obscured. Massee's statement that the larger "marginal cells," which I am calling true cystidia, are always thin-walled, must therefore be set aside, since I have observed typical thick-walled cystidia on the edge of the gills of a large number of species.

The question of whether these cystidia on the edge differ from the sterile cells in origin has not been settled, and depends somewhat on how much of the surface of the edge is meant when referring to "edge" of the gills. Massee shows no figure demonstrating that the larger "marginal cells" are different in origin from the cystidia on the sides of the gills.

The cystidia may, like the spores, be classed under two main types: the *thick-walled cystidia,* and the *thin-walled cystidia.* (*a*) The former are the "true cystidia" of Massee. Their walls are quite thick and highly refractive, frequently thickened only along the upper two-thirds of the cystidia, so that the wall of the pedicels remains unthickened. At the apex they exude crystalloid masses at maturity by the deliquescence of a small area or pore at the apex. I agree with Massee that the presence or absence of these caps at the apex of the cystidia is of no morphological value in classifying the species. The different age of the gills or influence of external conditions during development would modify the observation on different specimens of the same species. The thick-walled cystidia are generally, although not in all cases, quite ventricose above the pedicel, while above this enlargement they taper more or less toward the subacute or subrounded apex. This type is usually numerous, especially toward the edge of the gills. (*b*) The thin-walled type of cystidia has either thin walls corresponding in thickness to that of the pedicel, or when somewhat thickened as is frequently the case in older plants, the thickening tends to run around the apex and is uniform, whereas in the thick-walled type the wall varies markedly in thickness, usually thickest a short distance from the apex. Furthermore, the majority of the thin-walled type are entirely subcylindrical above the pedicel or if ventricose at all, the portion above is not abruptly narrowed to a lance-like neck as in many thick-walled cystidia, but remains broadly cylindrical to the broadly rounded or subtruncate apex. However, this type may show considerable variation from the commoner shape just described, and this is not unusual in the same plant. The commonest variation is that where there is a gradual tapering from the broadest part of the cystidium to its apex, which may even be acute; there is also a tendency in this type of cystidia to taper gradually, instead of abruptly, to the slender pedicel. The thin-walled cystidia also tend to be less numerous; in most species of this group they are scattered or scanty and may be almost lacking. In I. subfulva Pk. they are reduced to the condition of "sterile cells" and are often found with difficulty.

Doctor Peck named and described 41 species of Inocybe, some of which were originally placed in the old sections of Hebeloma and Inocybe in the system of Fries. Of these, 8 are referable to European species as synonyms, 2 are better Hebelomas, and 30 are retained as valid. Paxillus strigosus Pk., later included by Peck in his monograph as an Inocybe, is a plant with anomalous characters and here excluded. Inocybe sterlingii Pk. and Inocybe vatricosoides Pk., are referred to Hebeloma because of the viscid pileus on the one hand, and the absence of cystidia on the other.

From the standpoint of morphology, the species with smooth, subellipsoid spores and no cystidia can be considered as the simplest form of Inocybe, intimately related to the simpler forms of Cortinarious and Hebeloma, the three genera each in its own way becoming specialized from this common base. The next step could be conceived in the appearance of the subreniform spore with obtuse ends which is peculiar to most of the section of Inocybes lacking cystidia. It would appear probable that the next section with ellipsoid spores and cystidia was differentiated from the simplest form with ellipsoid spores. That the thin-walled cystidia came first is evident by their rarity in some species and possibly by other, at present obscure, characteristics due to their origin in the early stages of the plants. In certain few species, not included here, the spores show only a slight and obscure angularity, but marked enough to be detected repeatedly. A few species, of which I. maritimoides Pk. is an example, have angular spores and cystidia but the spores are not, or very faintly, nodulose. Here it would appear, then, is the bridge to the rough-spored species with cystidia, and it is a significant fact that scarcely a half dozen, if that many, species are authentically known in the whole genus which have rough spores and at the same time lack the cystidia. Even in the few species included here, for example, I. leptophylla Atk. and I. subfulva Pk., these are segregated with difficulty from I. lanuginosa Fr.-Bres. and I. calospora Quel. respectively. I. leptophylla was connected to I. lanuginosa by Atkinson himself by proposing a variet, which he called I. leptophylla var. cystomarginata, because true cystidia occur on the edge of the gills only in this form. In the case of I. subfulva, cystlike cystidia, intermediate between sterile cells and thin-walled cystidia can be observed in the hymenium. Here we have, however,

highly differentiated spores in both cases, and on this account these two species are not suited as a bridge from the smooth-spored to the rough-spored species, a step more easily conceived by the suggestion above that the simply angular spores represent this intermediate stage of differentiation. I assume, also, that the simplest type of pileus is represented by the Velutinae section, in the sense of Fries, initiated in a simple Cortinarius type, and passing through the Rimosae and Lacerae to the Squarrosae as the highest type of development in any branch of the genus. As a parallel possibility, we can start with the Viscidae, representing a simple type of Hebeloma, and go up through the same series. On this hypothesis, I have arranged below the species in the Peck collections as a suggestion of possible phylogeny in the genus.[1]

Synopsis

I Cystidia lacking
A Spores smooth — Connecting
(*a*) Spores subellipsoid — with Cortinarius

Sect. Velutinae

1 **Inocybe subtomentosa** Peck. Five New York collections.

Sect. Lacerae

2 **Inocybe subdecurrens** E. & E. (Syn. *I. tomentosa* E. & E.). Two New York collections; also from Canada.

Sect. Squarrosae

3 **Inocybe marmoripes** Atk. One New York collection.

(*b*) Spores subreniform

Sect. Rimosae

4 **Inocybe lanatodisca** Kauff. One New York collection.

5 **Inocybe fastigiella** Atk. (*I. rimosa* of Am. authors). Thirteen New York collections; also from Missouri.

6 **Inocybe rimosoides** Pk. Two New York collections; also from Massachusetts.

7 **Inocybe fastigiata** Schaeff–Bres. Four New York collections.

Sect. Lacerae

8 **Inocybe squamosodisca** Peck. Two New York collections.

Sect. Squarrosae

9 **Inocybe lorillardiana** Murr. (American form of *I. dulcamera* A. & S.). Two New York collections; also from New Jersey and Missouri.

10 **Inocybe caesariata** Fr. (Syn. *I. fibrillosa* Pk.). Three New York collections; also from Minnesota and Missouri.

[1]The two species from California, I. bakeri Pk. and I. bullosa Fr., are omitted for lack of data.

11 **Inocybe unicolor** Pk. Four New York collections; also from Ohio.

12 **Inocybe mutata** (Pk.) Massee. Three New York collections; also from Massachusetts.

13 **Inocybe calamistrata** Fr. Three New York collections; also from Ohio and Maine.

II Cystidia present — Connecting
A Spores smooth — with
(*a*) Cystidia of thin-walled type — Hebeloma

Sect. Viscidae

14 **Inocybe fuscodisca** (Pk.) Massee. Seven New York collections; also from Missouri.

Sect. Velutinae

15 **Inocybe agglutinata** Pk. Two New York collections.

16 **Inocybe leptocystis** Atk. Two New York collections; also from Massachusetts.

17 **Inocybe griseoscabrosa** (Pk.) Earle. Three New York collections.

18 **Inocybe infelix** Pk. (Syn. *I. euthelella* Pk.). (American form of *I. lacera* Fr.). Thirty-five New York collections; also from Massachusetts and Michigan.

Sect. Rimosae

19 **Inocybe eutheles** B. & Br.-Bres. One New York collection.

(*b*) Cystidia of the thick-walled type

Sect. Velutinae

20 **Inocybe geophylla** Fr. Thirty New York collections; also from Massachusetts.

21 **Inocybe lilacina** Fr.-Boud. (=*I. geophylla* var. *lilacina* Pk.). Four New York collections.

22 **Inocybe violaceifolia** Pk. One New York collection.

23 **Inocybe subochracea** (Pk.) Massee, and var. burtii Pk. Nine New York collections; also from Massachusetts.

24 **Inocybe serotina** Pk. One New York collection.

25 **Inocybe minima** Pk. Two New York collections.

26 **Inocybe comatella** (Pk.) Massee. One New York collection.

Sect. Rimosae

27 **Inocybe eutheloides** Pk. Eight New York collections.

28 **Inocybe pallidipes** E. & E. Four New York collections.

29 **Inocybe destricta Fr.** var. **minor** Kauff. Twelve New York collections; also from Pennsylvania.

30 **Inocybe excoriata** Pk. Two New York collections.

Sect. Lacerae

31 **Inocybe flocculosa** (Berk.) Sacc. One New York collection; also from Massachusetts.

32 **Inocybe pyriodora** Fr.-Bres. Two New York collections.

Sect. Squarrosae

33 **Inocybe hystrix** Fr. One New York collection.

B Spores angular (not nodulose)

(*a*) Cystidia of the thin-walled type

Sect. Lacerae

34 **Inocybe maritimoides** Pk. One New York collection.

C Spores rough, nodulose or spiny

(*a*) Cystidia of the thin-walled type

Sect. Rimosae

35 **Inocybe umbrina** Bres. (Syn. *I. castaneoides* Pk.). Four New York collections; also from Massachusetts.

36 **Inocybe umboninota** (Pk.) Massee. Two New York collections; also from Massachusetts.

37 **Inocybe hiulca** Fr.-Bres. One New York collection.

38 **Inocybe radiata** Pk. One New York collection; also from Massachusetts.

Sect. Lacerae

39 **Inocybe decipientoides** Pk. Six New York collections; also from Massachusetts and District of Columbia.

Sect. Squarrosae

40 **Inocybe lanuginosa** Fr.-Bres. (Syn. *I. nodulosa* Pk.). Three New York collections.

(*b*) Cystidia of the thick-walled type

Sect. Viscidae

41 **Inocybe trechispora** (Berk.) Karst. Three New York collections.

Sect. Velutinae

42 **Inocybe subexilis** Pk. Two New York collections.

43 **Inocybe paludinella** Pk. One New York collection.

44 **Inocybe failax** Pk. Two New York collections.

45 **Inocybe infida** (Pk.) Massee. Two New York collections; also from Vermont and District of Columbia.

46 **Inocybe reparida** Bres. (Syn. *I. desquamans* Pk.). One New York collection.

Sect. Rimosae

47 **Inocybe castanea** Pk. One New York collection.

48 **Inocybe albodisca** Pk. Two New York collections; also from Massachusetts and Missouri.

49 **Inocybe cicatricata** E. & E. Two New York collections.

50 **Inocybe intricata** Pk. One collection from Massachusetts.

51 **Inocybe proximella** Karst. From Massachusetts and Missouri.

52 **Inocybe asterospora** Quel. (Syn. *I. diminuta* Peck). Seven New York collections; also from Massachusetts and Missouri.

Sect. Lacerae

53 **Inocybe nigrodisca** Pk. One New York collection.

54 **Inocybe ochraceo-scabrosa** Atk. One New York collection from Ithaca.

Sect. Squarrosae

55 **Inocybe stellatospora** (Pk.) Massee. Two New York collections.

56 **Inocybe calospora** Quel. (Syn. *I. rigidipes* Peck). Three New York collections; also from Missouri, Massachusetts and Michigan.

III Cystidia lacking
A Spores nodulose or spiny

Sect. Squarrosae

57 **Inocybe leptophylla** Atk. (segregate of I. lanuginosa Fr.-Bres.). Two New York collections; also from Massachusetts.

58 **Inocybe subfulva** Pk. (Syn. *I. echinocarpa* E. & E.). Three New York collections.

Comments

1 **Inocybe subtomentosa** Peck. This belongs to a very confusing series of species, especially as to their macroscopic characters, including I. subdecurrens E. & E., I. caesariata Fr., I. dulcamera A. & S., I. unicolor Peck and I. lorillardiana Murrill. They all lack cystidia. The tomentose or fibrillose-tomentose covering of the pileus of these species is of a texture easily affected by weather conditions, so that mature plants or herbarium specimens of the same species can be referred to the Sections Velutinae, Lacerae or Squarrosae according to the weather conditions under which the plants developed. However, all of the series mentioned are clearly separable from I. subtomentosa and I. subdecurrens by the subreniform spores. The type of I. subtomentosa approaches more nearly in its external appearance I. caesariata. The spores, however, are of the variable kind, ranging in the type specimens from 7–9 micr. in length with a few up to 10 and 11 micr., by 5–6 micr. wide, a few 7 micr. Hereafter such a condition will be referred to thus: 7–9 (10.11) x 5–6 (7). Other collections show a larger per cent, up to 5 or 10 per cent of

the larger spores, in which case mycological practice undoubtedly would represent them thus: 7–11 x 5–7 micr.; and such a kind of variability must be reckoned with as a morphological character, giving us, in addition to the elliptical nonreniform spore, also a "variable" spore as compared to many other species, especially in this connection I. caesariata.

Both I. subtomentosa and I. subdecurrens lack a well-developed fibrillose sheath on the stem (subperonate), as do the other species mentioned, and hence the tomentose covering on the caps is also less highly developed, so that they rarely approach the Lacerae or Squarrosae, at least in material at present available. I. subdecurrens must remain a somewhat doubtful species; the cap of I. subtomentosa is described as "brownish-tawny" and dries deep ochraceous, while I. subdecurrens is said to have a "yellow-drab" pileus, and dries alutaceous. Whether the gills of I. subdecurrens are consistently decurrent and whether this character holds, needs to be established more definitely. The cap is described more pilose than in I. subtomentosa and for the present the species must be recognized.

5 **Inocybe fastigiella** Atkinson. This is a common species in the United States and is doubtless the plant referred to I. rimosa Fr. in many American lists. Even a cursory examination of European notices should convince one that the most widely accepted conception of the Friesian species can not be that of ours. Patouillard, Bresadola and Massee consider the Friesian plant to possess cystidia, and European specimens bear this out. Ricken in "Blätterpilze" evidently has a plant identical or close to ours, and in my reference to this species in "Agaricaceae of Michigan" it was referred to Ricken's I. rimosa. This is a strong indication that I. fastigiella occurs also in Europe. I have no evidence that it has been named before. The specimens described by Doctor Peck as possessing cystidia can not be the species as it is known in Europe, but are probably referable to I. destricta var. minor and elsewhere.

6 **Inocybe rimosoides** Peck. The pale yellow pileus distinguishes this from I. fastigiella; and the lack of a subemarginate bulb, from I. cookei Bres.

8 **Inocybe squamosodisca** Peck. This has many similarities to I. caesariata, but the pileus has apparently at first a definite continuous glabrous cuticle, which under certain weather conditions easily cracks to form scales, that is, becomes diffracted-scaly; while

I. caesariata has a tomentose-fibrillose covering when young and this may be torn into ascending or recurved scales.

11 **Inocybe unicolor** Peck. The non-variable subreniform, large spores (9–12 x 5–6), and the paler ochraceous, whitish or grayish ochraceous color of the pileus distinguishes this from its relatives. The color fades and the dried specimens are dull or sordid whitish.

12 **Inocybe mutata** (Peck) Massee. A good species, separable from I. hystrix by the lack of cystidia. It has the stature of small specimens of I. calamistrata, but the base of the stem is not blue or green. The spores measure 8–10 (12) x 5–5.5 (6) micr.

14 and 15 **Inocybe fuscodisca** (Peck) Massee. This is separated with difficulty from I. agglutinata Peck in dried specimens. Some of Peck's collections marked I. agglutinata doubtless belong here. The cystidia are of the thin-walled type in both, but somewhat aberrant in that the wall is often unusually thick. The thickening, however, passes equally around the rounded apex and the shape and their variability also indicate their thin-walled relationship. The spores average slightly larger in I. agglutinata, and Peck has unduly emphasized this in the monograph. In some specimens of I. fuscodisca the spores are scarcely more than 9 micr. long, but in general, the spores may be said to measure 8–10 (11) x 5–6 micr., whereas those of I. agglutinata vary from 8–12, usually 8–10 (12) x 5–6 micr. It appears, then, that we must rely on the characters of the fresh plants. I have never, knowingly, collected either species. Peck says the pileus of I. fuscodisca has a separable, viscid pellicle, while in I. agglutinata it is covered with fibrils which appear agglutinated, but there is no viscidity. He gives the size of the plants approximately the same, but I suspect I. agglutinata, if distinct, averages larger.

16 **Inocybe leptocystis** Atkinson. I have long known this species of Atkinson's. The cystidia tend to the shape of a cylindrical funnel with slender stem, such as are used in chemical apparatus; they are more abundant than is usual in species with the thin-walled type of cystidia. The pileus is bay-brown, silky, becoming slightly appressed-scaly at times. The stem is pallid and solid; the gills are crowded and narrow. The spores measure 7–9 x 4–5 micr., smooth and subelliptical. Three collections were found in the Peck herbarium; they were marked I. subochracea, I. rimosa and I. hirtella respectively.

17 **Inocybe griseoscabrosa** (Peck) Earle. In the original description of this species in the 26th report, page 57, 1874, Peck gives the spore measurements 8.75 x 5 micr. In this he was followed by Massee (Ann. Bot., 18: 484, 1904) who says he examined the type. Later, in his monograph, Peck corrected this manifest error and gives the measurements larger. I have found them to be 10–12 (13) x 5–7 micr. The cystidia are thin-walled, scattered to few on the sides of the gills, more abundant on edge, and as a rule, broadly fusiform in shape.

18 **Inocybe infelix** Peck. This is without doubt the American form of I. lacera Fr. of Europe. The species is very common in this country, but our plants do not seem to have the reddish flesh of the stem which is said to be a characteristic of the European plant. I. infelix is very variable. The peculiar lanuginose covering of the pileus is readily affected by weather conditions, and hence a more or less scaly pileus is often met with. The spores are characteristic but quite variable in length. As far as I know, no other species of Inocybe has just such spores, and the species could be segregated on spore-lengths, if one did not take into account the plasticity in their nature. In shape, they are elongated-cylindrical or slightly narrowed one way, and frequently are subtruncate at one end. Peck first gave the length as 10–12½ micr. (32d report, p. 29, 1879); later in the monograph he increased this to 10–15 micr. In an examination of over seventy-five collections from all parts of the country, I found considerable variation. Evidence points to the age of the plants at time of collection, restrictive effect of sudden dry weather, and perhaps other influences, as the causes of a shorter spore-size in some collections. Ten to 13 micr. is the most common length; 10–15 micr. is frequently met with, and in frequent observations, even longer spores are scattered in the mount, ranging up to 20 micr. in length. The size of the spores of I. infelix can then be indicated thus: 10–13 (15, 18, 20) x 4–5½ (6). A collection of I. lacera Fr. from Sweden, yielded spores of the same shape, measuring 12–15 (20) x 5–6 micr. and Bresadola (Fungi of Poland, Ann. Myc., 1: 70) gives the spores of I. lacera Fr. as 11–16 x 4–5 micr. The cystidia of both European and American plants are of the thin-walled type. Bresadola (l. c.) would refer I. lacera Fr. to I. cristata Scop.

22 **Inocybe violaceifolia** Peck. One of the rare species. Its limitations are not yet known, but it is without doubt distinct from I. cincinnata Fr. and I. obscura Fr. of Europe. Only a

few plants of these violet-gilled species are usually found, and they all appear to be very rare.

23 **Inocybe subochracea** (Peck) Massee. I would include in this, var. burtii Peck, since the greater or lesser development of the veil is the only difference between them and depends on conditions for growth. This species is sharply characterized among the ochraceous or yellowish species by the abundant thick-walled, slender cystidia, especially numerous over the whole surfaces and edges of the gills. These cystidia are tinged yellow, and in dried specimens this characteristic is brought out still more, especially by the use of potash solution. In nearly all other species, the cystidia are hyaline. The subcuneate shape of the spores is also a helpful character, although not so sharply marked.

24 **Inocybe serotina** Peck. This is a large whitish or yellowish-white species of sandy regions. The spores are elliptical. The cystidia are few and hard to find, short, 45–55 x 18–22 micr. Peck does not mention them. The species is closely related to the genus Hebeloma, but no viscidity was reported on the pileus.

25 **Inocybe minima** Peck. The type was collected by Simon Davis in Massachusetts. Peck found it also in New York State. The pileus is minutely fibrillose or lanuginose, recalling the kind of covering present on the pileus of I. infelix, but the spores and cystidia are quite different. The spores measure slightly longer than given by Peck.

26 **Inocybe comatella** (Peck) Massee. Quite small and occurring on rotten wood. The spores measure 6–7 (8) x 3–4 micr., as given by Massee; this is smaller than noted by Peck. The cystidia are abundant and thick-walled. The hairs of the pileus appear as hyaline bundles of hyphae under the microscope.

27, 28, 29 **Inocybe eutheloides** Peck; **I. pallidipes** E. & E.: and **I. destricta** var. **minor** Kauff., are closely related and kept apart with difficulty in the dried condition. The pileus of all three are more or less rimose, the extent of rimosity depending on weather conditions. This series of closely similar species includes I. eutheles Berk., which apparently has thin-walled cystidia. I. destricta var. minor has both the thin-walled and thick-walled type, the former predominating on and near the edge of the gills, but mixed with the other type. I. eutheloides and I. pallidipes have thick-walled cystidia of the usual appearance; when growing, I. eutheloides has a fawn colored cap, while that of I. pallidipes varies from light brown to darker

brown or umber; the stems of both are persistently white or whitish. The spores are the same in the two species. On the other hand the stem of I. destricta var. minor is rufous-tinged at maturity, the pileus becomes normally more lacerated-scaly and usually there is a shade of reddish in the brown color. The plants of the three species average the same size.

30 **Inocybe excoriata** Peck. A fairly large plant, with pileus 3–5 cm broad. Other species which have the general appearance of it, differ in not possessing any cystidia. The pileus is not always excoriate and not too much stress must be placed on this character. The cystidia are thick-walled, fairly abundant and stout, and it is possible that it is I. eutheles B. & Br. of Massee's monograph, although not like specimens referred to I. eutheles by Bresadola.

34 **Inocybe maritimoides** Peck. There seems to be no other collection in existence except the type. It is clearly distinguished by its angular, non-nodulose spores and thin-walled, scattered cystidia. When the spores are rolled over under the microscope the surface is obscurely uneven; they are subrectangular to subquadrate in outline when at rest.

36 **Inocybe umboninota** (Peck) Massee. In the monograph, Peck amends the original description in the 38th report, page 87, by citing it as only "in part" the new conception. I shall therefore use the specimens referred to in the monograph as the type. By doing so, a number of difficulties connected with the identity of this species disappear. An examination of several collections which must be referred here, showed that the plants of this species vary larger than the size given by Peck. The pileus is 1.5–5 cm broad, often only a few of the large size in a collection. Nevertheless it must be considered a medium to large size Inocybe. The spores have the same characteristics as those of I. umbrina Bres. but the latter is a small plant, with very rimose caps, while the caps of I. umboninota are scarcely rimose as a rule although tending occasionally to become more so. The spores measure 6–8 x 4–6 micr., are angular-tuberculate, the tubercles not very distinct. In stature it simulates I. asterospora Quel.

38 **Inocybe radiata** Peck. This is apparently our nearest American relative of I. carpta Bres., but the pileus and stem of I. radiata do not possess the lanuginose covering of Bresadola's plants, and the spores of I. radiata are "generally narrowed toward one end" (Peck), while those of specimens from Bresadola which I examined are more rectangular in outline. The size of the

spores is about the same in the two species, 7–11 (12) x 5–6 (7) micr., and both have the scattered, thin-walled type of cystidia. The tubercles of the angular spores are not very distinct and often far apart, and in undeveloped plants the spores may appear as if non-nodulose.

39 **Inocybe decipientoides** Peck. As in I. radiata the spores of this species are angular-nodulose, generally narrower toward one end, and variable in shape and especially in size; they measure 9–11 (13) x 5–7 micr. with very manifest, obtuse, but scattered nodules. The size, as given by Peck, is unsatisfactory. I. decipiens Bres. has angular spores without nodules. Peck tried to refer some specimens received by him to I. decipiens, but all these collections have distinct nodules on the spores and are to be considered I. decipientoides. This species was discovered by Simon Davis in Massachusetts, and through his kindness I have examined a number of collections. In one lot the spores exceeded the size I have given, measuring up to 15 micr. long. This great variability must be considered an innate character of this species. The pileus is somewhat squamulose, especially on the umbo.

42 **Inocybe subexilis** Peck. A small species of good standing.

43 **Inocybe paludinella** Peck. This was referred by Massee to I. trechispora Berk. The type material, as Peck has already pointed out in the monograph, shows that there is no basis for this synonymy except the similarity of the spores. The stature of I. paludinella is entirely different, the stems are long and slender, the pileus is not viscid and the cystidia are lanceolate, rather long, while in I. trechispora they are short and obese.

44 **Inocybe fallax** Peck. The size of the plants varies considerably. Usually only a few specimens occur in a place, and often they run smaller than is typical. Peck gives the size of the pileus 2.5–5 cm but I have seen collections where the pileus measured up to 7 cm. The spores of the smaller, mostly poorly developed plants do not surpass 7–9 x 5–7 micr., but in luxuriant and well-developed plants they are 7–10 (11) x 5–8 (9) micr., subsphaeroid to subrectangular in outline, with distinct irregular nodules; the figures of the spores, given by Peck (Plate O, N. Y. State Mus. Bul. 75) are unsatisfactory and do not show the variation in shape. The plants dry whitish, while I. infida Peck becomes brown. The cystidia are very obese. Its nearest European relative seems to be I. umbratica Quel. (*I. commixta* Bres.), which apparently differs only in its solid stem and perhaps the cystidia. The nature of the stem should always be noted in the fresh plants.

45 **Inocybe infida** (Peck) Massee. This has been a much misunderstood species. When dried the pileus becomes pale brown, the stem dark fuscous; this characteristic, along with the angular-nodulose spores, separates it from I. geophylla. I suspect, from this, that too much emphasis has been placed on its color when fresh, when it is said to imitate I. geophylla almost perfectly. Massee referred I. umbratica to it as a synonym, but the stem of the European species has a subturbinate, subemarginate bulblet, which is not present in our plant, and the stem of I. umbratica is solid. The gills of I. commixta Bres., which is synonymous with I. umbratica, are described as "very crowded," while in I. infida, although narrow, they are merely close. Specimens from Bresadola, marked I. commixta, had retained the whitish color on drying.

47 **Inocybe castanea** Peck. The size of the plants and the spores are similar to I. umbrina Bres., but the pileus is not markedly rimose as in that species, has reddish tints and the cystidia are definitely thick-walled. I have not collected it, and other differences doubtless occur.

48 **Inocybe albodisca** Peck. This is a clear-cut species.

50 **Inocybe intricata** Peck. This deserves its name, because of the confusion in the type collection, although Peck named it for a different reason. It was first collected in Massachusetts. The type collection contains two species: one with thin-walled cystidia which is probably I. hiulca Bres., the other the genuine type with thick-walled cystidia and large, broadly elliptical spores, not angular, densely and coarsely nodulose, 10–12.5 x 7–8 (9) micr. It is a well-marked species. It differs from I. asterospora, according to Peck, "by its smaller size, pale shining pileus, stuffed or hollow stem and larger spores." That Peck was dealing with selected plants, of the type only, is shown by the agreement of the spores and cystidia with his description.

53 **Inocybe nigrodisca** Peck. The small spores, subsphaeroid to subrectangular in outline, irregularly angular-nodulose, the nodules indistinct, are similar to those of I. umbrina, I. umboninota and I. castanea. The surface of the pileus is very minutely lanuginose as in I. minima and of the same small size, but that species has smooth spores. The cystidia are slender, lanceolate and thick-walled.

55 **Inocybe stellatospora** (Peck) Massee. This rather large plant with a pileus 2–5 cm broad, is unique among the Squarrosae,

by its small, nodulose-angular spores, variable in shape, and by its change of color on drying when it becomes dark, smoky umber or fuliginous. Dried specimens are easily recognized by this blackening, although Peck makes no remark about it. It seems to be a rare and solitary-growing species.

58 **Inocybe subfulva** Peck. This species and I. echinocarpa E. & E. are considered synonyms by Massee of I. gaillardi Gill. I can not bring myself to believe that the spines on the spores of our species are as bristle-like, or as long, as illustrated for I. gaillardi by Massee (Am. Bot., XVIII, 504, pl. 32, fig. 11) and by Patouillard (Tab. Analyt., pl. 11, fig. 8). An examination of Ellis's plants in two sets of N. Am. F. No. 1904, shows that I. echinocarpa is identical microscopically with I. subfulva Peck, and, although apparently differing in stature, must be considered a synonym of Peck's species. The hymenium lacks typical cystidia of either kind, but there are present, widely scattered, cystlike sterile cells which surpass the basidia slightly in length. The absence of cystidia separates it from I. calospora and I. asterospora. The spines on the spores are broader at the base, while in I. calospora they are cylindrical rod-shape. The stature is that of I. calospora.

NECESSARY CHANGES OF CERTAIN PLANT NAMES

The following notes on the nomenclature of certain plants have developed as the result of further studies on the North American Convolvulaceae, and of the genera and species of New York State plants. In many cases the study of certain groups has taken me afield into related genera and species which do not grow in this State, and for that reason, chiefly, these notes need not form a part of the proposed list of New York State plants.

Stachys grayana, sp. nov.

Stachys hyssopifolia var. ambigua A. Gray, Syn. Fl., 2:387. 1878.

S. ambigua (Gray) Britton, Torr. Club Mem., 5:285. 1894. Not S. ambigua J. E. Smith in Sowerby & Smith, Engl. Bot., pl. 2089.

Found eastward to Massachusetts, but not yet reported from New York State.

Stachys riddellii, sp. nov.

Stachys cordata Riddell, Suppl. Cat. Ohio Pl. 15. 1836. Not Gilib. 1781.

Oenothera rydbergii, nom. nov.

Onagra strigosa Rybd., Oenothera strigosa Mackenzie & Bush, Oenothera biennis var. canescens Torr. & Gray. Not Oenothera strigosa Willd., nor Oenothera canescens Torr. & Frem.

A western species ranging from Minnesota to Kansas, Utah, Washington and British Columbia.

Heliotropium nuttallii, nom. nov.

Lithospermum tenellum Nutt. Trans. Am. Phil. Soc., 5: 188. 1837. Not L. tenellum Raf. Am. Mo. Mag., 4: 195. 1819.
Heliotropium tenellum (Nutt.) Torrey.

A southern species ranging from Kentucky and Kansas to Alabama and Texas.

Lithospermum lutescens N. Coleman, Cat. Pl. Grand Rapids, Mich. 29. 1874.

This name will have to replace Lithospermum latifolium Michx. 1803, which is invalidated by the earlier L. latifolium Forsk, 1775. The species ranges from western New York and Ontario to Minnesota, Virginia and Tennessee.

BIVONEA Raf. Am. Mo. Mag., 2:268. 1818.

The type is designated as Bivonea stimulosa (Michx.) Raf., l. c. (Jatropha stimulosa Michx.), and as such the generic name clearly antedates Cnidoscolus Pohl (1827).

Bivonea texana (Muell. Arg.) comb. nov. Jatropha texana Muell.Arg., Cnidoscolus texana Small.

CROPTILON Raf. Fl. Tellur., 2:47. 1837.

The type is designated as Inula divaricata Nutt. and transferred to the genus as Croptilon divaricatum Raf., l. c. This is also the type of Isopappus Torr. & Gray (1841) and to it may be added the only other species, viz:

Croptilon hookerianum (T. & G.) comb. nov. Isopappus hookerianus T. & G., Aplopappus hookerianus A. Gray.

HYPOLYTRUM Rich. in Pers. Syn., 1:70. 1805.

Lipocarpha R. Br. App. Tuckey Exp. Congo 459. 1818.

The type of Lipocarpha R. Br., is L. argentea R. Br., l. c. 477. This is the Hypolytrum senegalense Rich. the type of Hypolytrum, but argentea is an older name. Hypolytrum also

contains in the original publication two other species, namely, H. gracile Rich. which is Lipocarpha sphacelata Kunth, and H. latifolium Rich. which I am unable to identify. The older generic name should be restored and our single eastern American species becomes:

Hypolytrum maculatum (Michx.) comb. nov.

Kyllingia maculata Michx.; Lipocarpha maculata Torrey.

These facts were pointed out long ago by Torrey (Ann. Lyc. N. Y., 3:438. 1836), who ascertained them too late to affect his treatment of Lipocarpha in his monograph of the Cyperaceae, and merely a note regarding the matter was made as an appendix.

Scirpus microcarpus var. **confertus** (Fernald) comb. nov.

Scirpus rubrotinctus var. confertus Fernald, Rhodora 2:21 1900.

Scirpus cyperinus var. **congesta**, var. nov.

Scirpus eriophorum var. condensatus Fernald, Proc. Am. Acad. 34:501. 1899.

S. cyperinus var. condensatus Fernald, Rhodora 2:16. 1900. Not Eriophorum cyperinum var. condensatum Peck, 46th Rep't N. Y. State Mus. 50. 1893 (which is the same as S. atrocinctus var. brachypodus Fernald).

Scirpus atrocinctus var. **condensatus** (Peck) comb. nov.

Eriophorum cyperinum var. condensatum Peck, 46th Rep't N. Y. State Mus. 50. 1893.

Scirpus atrocinctus var. brachypodus Fernald, Proc. Am. Acad. 34:503. 1899.

AMBLIRION Raf. Am. Mo. Mag., 2:256. 1818.

The Lilium pudicum of Pursh, designated as the type of this genus (**Amblirion pudicum** Raf., l. c.) has also been made the type of a new genus Ochrocodon by Rydberg (Rocky Mountain Flora, 164. 1917). If maintained as a separate genus, the older name given to it by Rafinesque should be used.

Bonamia multicaulis (Brandegee) comb. nov.

Breweria multicaulis Brandegee, Univ. Calif. Bot. Stud., 4:185. 1911.

Type locality: Sierra del Rey, Coahuila, Mexico. *Purpus* No. 4457.

The genus Bonamia Pet. Thouars, is closely related to Stylisma Raf. and Breweria R. Br. (1810) is a synonym of

Bonamia. The genus as now understood includes but three American species, one in Florida, one in western Texas and one in Coahuila, Mexico.

Thyella hirtiflora (Mart. & Gall.) comb. nov.

Ipomoea hirtiflora Mart. & Gall. Bull. Acad. Brux. XII., 2:264. 1845.
Jacquemontia lactescens Seem. Bot Voy. Herald 171. 1852.
Convolvlus piosiflorus Moc & Sesse, Fl. Mex. in La Naturaleza II. 2: append. 37. 1893.
Thyella lactescens House, Torr. Club Bul. 33:314. 1906.

The type locality is "Cerro de Lancon, near Panama" and the species ranges from Oaxaca to Peru. Ipomoea hirtiflora as treated in N. Y. Acad. Sci., 18: 193. 1908, by the writer, is a misidentification, and the specimens there referred to Ipomoea hirtiflora have since been renamed Ipomoea villifera.

Jacquemontia obcordata (Millsp.) comb. nov.

Convolvulus obcordatus Millsp. Field Col. Mus. Bot., 2:88. 1900.

The type was collected near Progresso, Yucatan, by Doctor Millspaugh (*No. 1707*, 1899). This species is very closely related to J. ovalifolia (Vahl) Hallier f., which is well represented by material collected by Britton & Harris at Great Pedro Bay, Jamaica and in Antigua. The type of Convolvulus ovalifolius Vahl is probably not in existence, but the West Indian material referred to matches the description of that species very closely. The Yucatan specimens present certain well marked but minor points of difference, and for the present they may well be regarded as distinct but closely related species.

JACKSONIA Raf. Med. Repos. II., 5: 352. 1808.

With no desire to revive the controversy, if such it might be called, between Doctor Greene (Pittonia, 2: 174. 1891; 274. 1892; Erythea, 2: 68. 1894) and Doctor Britton (Erythea, 2: 67, 68. 1894; Bul. Torr. Club, 20: 271. 1893), the writer feels convinced that Jacksonia is the prior and correct name for the plant later designated by Rafinesque as Polanisia.

As the name is first published, it appears as though Rafinesque designates as the type, Cleome dodecandra L. A perusal of the article wherein this is published shows that Rafinesque was presenting a "prospectus" of two intended works on North American botany, and a reading of the entire article seems to indicate that

he had before him a copy of Michaux's Flora since he calls attention to a number of so-called mistakes by Michaux or at least cases where Michaux has used a wrong generic name, and which he proposes to correct. For example, in this article he proposes Adlumia for Fumaria recta Michx. Kampmannia for Zanthoxylum tricarpum Michx. and some others. He calls attention to Michaux's not adopting such names as Bartonia Willd., Marshallia Schreb., Brasenia Schreb., Muhlenbergia Schreb., and he also proposes a number of new generic names to take the place of Michaux's which he considers inappropriate.

The plant under consideration was called "Cleome dodecandra L." both by Michaux and by Pursh, but of course it is not the old world plant so named by Linnaeus. As pointed out by Doctor Greene (Pittonia, 2: 174) it is apparent that the only Cleome dodecandra with which Rafinesque was acquainted was the American plant so named by Michaux, Pursh and other early botanists of this continent. The question, aside from the possible intent that may be inferred from this article taken as a whole, apparently hinges upon whether we shall consider as the type of Jacksonia, the Cleome dodecandra of Linnaeus, or the American species designated by Michaux under the same name. Without taking into consideration the apparent intent of Rafinesque, there is another reference to the matter by Rafinesque which seems to answer the question. In a review of Pursh's Flora (Am. Mo. Mag., 2: 267. 1818) Rafinesque says of the American plant there described as "Cleome dodecandra L."

> ".... is more different from Cleome than all the tetradynmous genera from each other, or Quercus from Juglans! Rafinesque had given to it the name Jacksonia Obs. M. R. which he has since changed into Polanisia, a better name."

I take it that this is sufficiently clear evidence that Rafinesque knew no other Cleome dodecandra, at least at that time, than the American plant so called by Michaux and Pursh, and that he himself regarded his Polanisia as a later, and as he says "a better name," that in crediting the species name to Linnaeus, he was perpetuating the same mistake made by the others, who like himself were unaware that the plant under consideration might not be the plant called dodecandra by Linnaeus.

NYMPHOIDES (Tourn.) Hill

There are three species in the eastern United States, one of which is introduced, known under the common name of floating heart. They have had quite a varied nomenclatorial career. Formerly placed in the genus Villarsia, they have since been transferred first to Limnanthemum, and more recently to Nymphoides.

The type of Nymphoides, is N. flava Hill, which is the Menyanthes nymphaeoides Linn. (Nymphoides peltatum (S. P. Gmel.) Britten & Rendle; Nymphoides nymphaeoides (L.) Britton). This with two or three closely related species of the Old World is characterized by having terminal flowers in sessile umbels, or the umbels in the forks of the upper leaves, the segments of the corolla ciliated and seeds with a fringelike margin. It is clearly not congeneric with the native species of the eastern United States, and the generic name Nymphoides, should be restricted to N. nymphaeoides (L.) Britton, said to be naturalized in ponds in the District of Columbia, and to those species of the Old World possessing the same general characters. Among other generic names applied to this type are: Limnanthus Necker (1790), Limnanthes Stokes (1812), Waldschmidia Weber (1780) and Schweyckerta C. C. Gmelin (1805).

TRACHYSPERMA Raf. Med. Repos. (II) 5:352. 1808.

Villarsia J. F. Gmelin, Syst. 447. 1791. Not Villarsia Neck 1790.

The native species of floating heart of the eastern United States are characterized chiefly by the flower umbels being attached to the petioles of the usually floating leaves, and accompanied by tufts of rootlike tubers, the seeds smooth or glandular roughened and the white corolla-lobes entire.

The type species is designated by Rafinesque as Trachysperma natans (Menyanthes trachysperma Michx.).

Trachysperma aquatica (Walt.) comb. nov.

Anonymos aquatica Walt. Fl. Car. 109. 1788.
Villarsia aquatica J. F. Gmel., l. c.
Menyanthes trachysperma Michx. Fl. Bor. Am., 1:126. 1803.
Trachysperma natans Raf., l. c.
Limnanthemum trachyspermum A. Gray, Man. Ed. 5, 390. 1867.
L. aquaticum Britton, Trans. N. Y. Acad. Sci., 9: 12. 1889.
Nymphoides aquaticum Kuntze, Rev. Gen. Pl. 429. 1891.—Fernald, Rhodora, 10:55. 1908.

Trachysperma lacunosa (Vent.) comb. nov.

Villarsia lacunosa Vent. Choix des Plantes, 9. 1803.
Limnanthemum lacunosum Griseb. Gent. 347. 1839.
Nymphoides lacunosum Kuntze, l. c.— Fernald, l. c. 54

Trachysperma humboldtiana (H.B.K.) comb. nov.

Villarsia humboldtiana H. B. K. Nov. Gen. & Sp., 3:187. 1819.
Limnanthemum humboldtianum Griseb. Gent. 347. 1839.
Nymphoides humboldtianum Kuntze, l. c. 429.

Trachyspermum grayana (Griseb.) comb. nov.

Limnanthemum grayanum Griseb. Cat. Pl. Cub. 181. 1866.
Nymphoides grayanum Kuntze, l. c. 429.

Andrachne pumila (Raf.) comb. nov.

Synexemia pumila Raf. Neogent. 2. 1825.
Lepidanthus phyllanthoides Nutt. Trans. Am. Phil. Soc., 5:175. 1837.
Andrachne phyllanthoides Muell. Arg. in DC. Prodr., 15:435. 1862.

This small Euphorbiaceous plant is placed by Rafinesque in his genus Synexemia, based upon Phyllanthus carolinianus Walt. The description is brief and admittedly poor but possesses certain points which can apply to no other Euphorbiaceous plants found in Kentucky. The description reads as follows:

"3. S. pumila Raf. erect, branches angular, leaves petiolate, obovate, obtuse, entire, glaucous beneath, flowers germinate, drooping, one male, one female, Kentucky; flowers yellowish, capsule trilocular?"

GEBOSCON Raf. Cat. 14. 1824.

Pseudoscordum Herb. Amaryll. 11. 1837.
Nothoscordum Kunth, Enum. 4:457. 1843.
Caloscordum Herb. In Lindl. Bot. Reg. Mics. 66. 1844.
Hesperocles Salisb. Gen. Pl. Fragm. 85. 1866.
Oligosma Salisb. l. c.
Periloba Raf. Fl. Tellur., 4:87. 1840.

Geboscon bivalve (L.) comb. nov.

Ornithogalum bivalve L. Sp. Pl. 306. 1753.
Allium ornithogaloides Walt. Fl. Car. 121. 1788.
Allium striatum Jacq. Coll. Suppl. 51. 1796.
Geboscon striatum Raf., l.c.
Nothoscordum striatum Kunth, l.c. 459.
N. bivalve Britton, in Britton & Brown, Illus. Fl. 1:415. 1908.
Oliogosma bivalve Salisb. Gen. Pl. Fragm. 85. 1866.

This member of the Alliaceae (onion family), known as the yellow false garlic, ranges from Virginia to Ohio, Tennessee, Nebraska, Florida, Texas and Mexico. It appears to have been known by

Rafinesque, and recognized as a generic type, during his residence at Lexington.

Among other species of this genus are: Caloscordum neriniflorum Herb. in Lindl. Bot. Reg. Misc. 66. 1844 (= **Geboscon neriniflorum** (Herb.) comb. nov.); Hesperocles fragrans Salisb. Gen. Pl. Fragm. 85. 1866 (=**Geboscon fragrans** (Lindl.) comb. nov.), in addition to several other species which occur in tropical and in South America.

EUCNIDE Zucc. (Loasaceae)

Eucnide parryi, nom. nov.

Mentzelia urens Parry, ex A. Gray, Proc. Am. Acad., 10: 71. 1874. Not Vell. Fl. Flum. 5: t. 97. 1825.
Eucnide urens Parry, Am. Nat., 9: 144, 1875.

HYPOGON Raf. Fl. Ludov. 148. 1817.

(Labiatae)

Micheliella Briq. in Engl. & Prantl. Pflanzenf., 43a: 325. 1897 — Small, Fl. S.E. U.S. 1050. 1903.

The type species is designed by Rafinesque as **Hypogon anisatum** (Sims) Raf. l.c. (Collinsonia anisata Sims. Bot. Mag. *t. 1213;* M. anisata Briq., l.c.)

Hypogon verticillatum (Baldw.) comb. nov.

Collinsonia verticillata Baldw. in Ell. Bot. S.C. & Ga. 1: 36. 1821.
M. verticillata Briq., l.c.

Cacalia rotundifolia (Raf.) comb. nov.

The name of the Great Indian plantain, Cacalia reniformis Muhl. (in Willd. Sp. Pl. 73: 1753. 1804) is invalidated by an earlier Cacalia reniformis Lam. Fl. Fr., 2: 75. 1778. For this reason the species was renamed Senecio muhlenbergii by Schultz Bipontinus (Flora, 28: 499. 1845). Rafinesque took up the name of Muhlenberg's in Mesadenia (M. reniformis Raf.) but also gave the same plant another name, **Mesadenia rotundifolia** Raf. (New Fl., 4: 79. 1836), which becomes the available name where the species is regarded as a member of the segregated genus Mesadenia.

PERIDERIDIA Reichb. Handb. 219. 1837.

(Ammiaceae)

Eulophus Nutt. in DC. Coll. Mem. 5: 69. 1829. Not Eulophus R. Br. in Bot. Reg. sub. t. 573. 1821.

Podosciadium A. Gray, Proc. Am. Acad. 7: 345. 1868.

The genus Eulophus of Brown is a large group of orchids native of the tropics of the Old World. It has been generally written Eulophia (R. Br. Bot. Reg. t. 686. 1823), which was merely a change of spelling from the original publication in 1821.

The American species of Eulophus Nuttall, should therefore be placed in the genus Perideridia of Reichenbach, based upon Eulophus americanus of Nuttall.

Perideridia americana (Nutt.) Reichenb. l.c. (*Eulophus americanus* Nutt.)

Perideridia parishii (C. & R.) comb. nov.

Pimpinella parishii C. & R., Bot. Gaz., 12: 157. 1887.
Eulophus parishii C. & R., Contr. Nat. Herb., 7: 111. 1901.

Perideridia rusbyi (C. & R.) comb. nov.

Eulophus parishii rusbyi C. & R. Bot. Gaz., 14: 281. 1889.

Perideridia pringlei (C. & R.) comb. nov.

Eulophus pringlei C. & R., Rev. N. Am. Umbell. 113. 1888.

Perideridia pringlei simplex (C. & R.) comb. nov.

Eulophus pringlei simplex C. & R., Rev. N. Am. Umbell. 113. 1888.
E. simplex C. & R., Contr. Nat. Herb., 7: 112. 1901.

Perideridia bolanderi (A. Gray) comb. nov.

Podosciadium bolanderi A. Gray, Proc. Am. Acad., 7: 346. 1868.
Eulophus bolanderi C. & R., Rev. N. Am. Umbell. 112. 1888.

Perideridia californica (Torr.) comb. nov.

Chaerophyllum(?) californicum Torr. Pacif. R. Rep., 4: 93. 1856.
Pododciadium californicum A. Gray, l. c. 346.
Eulophus californica C. & R. Rev. N. Am. Umbell. 114. 1888.

GREGORIA Duby, Bot. Gall. 1: 383. 1828.

(Primulaceae)

Douglasia Lindl. in Quart. Jour. Sci. 385. Oct. 1827. Not Douglassia Adans. 1763, nor Schreb. 1791.

The type of Gregoria (G. vitaliana Duby, l.c.) native of the Pyrenees mountains, is congeneric with the American species, heretofore designated as Douglasia, and indeed was transferred to Douglasia Lindl., by Bentham and Hooker.

Gregoria nivalis (Lindl.) comb. nov.

Douglasia nivalis Lindl., l.c. 383.

Gregoria montana (A. Gray) comb. nov.
Douglasia montana A. Gray, Proc. Am. Acad., 7:371. 1868.
Gregoria laevigata (A. Gray) comb. nov.
Douglasia laevigta A. Gray, Proc. Am. Acad., 7:371. 1868; 16:105. 1881.
Gregoria arctica (Hook.) comb. nov.
Douglasia arctica Hook. Fl. Bor. Am., 2:140. 1840.
Gregoria dentata (S. Wats.) comb. nov.
Douglasia dentata S. Wats., Proc. Am. Acad., 17:374. 1882.
Gregoria johnstoni (A. Nels.) comb. nov.
Douglasia johnstoni A. Nels.

THELYPTERIS (Ruppius) Schmidel, Icon. Pl. Ed. 2, 45. *pls. 10 & 13.* 1762.

Doctor Nieuwland (Am. Mid. Nat., 1:226. 1910) has pointed out the fact that the earliest valid name for our shield ferns, heretofore known as Dryopteris, or Aspidium, is Thelypteris. In addition to the species mentioned by him, the following New York species should be transferred to this name.

Thelypteris thelypteris (L.) comb. nov. Acrostichum thelypteris L., Aspidium thelypteris Sw., Dryopteris thelypteris A. Gray; Thelypteris palustris Schrott.

Thelypteris clintoniana (D. C. Eaton) comb. nov. Aspidium cristatum var. clintonianum D. C. Eaton; Dryopteris clintoniana Dowell.

Thelypteris dilatata (Hoffm.) comb. nov. Polypodium dilatatum Hoffm.; Dryopteris dilatata A. Gray.

Thelypteris dilatata var. **americana** (Fischer) comb. nov. Dryopteris dilatata var. americana Benedict.

Thelypteris intermedia (Muhl.) comb. nov. Polypodium intermedium Muhl.; Dryopteris intermedia A. Gray.

INDEX

Additions to state herbarium, 6
Albany county, 7–8
Aleurodiscus farlowii, 16
  penicillatus, 16
Alternaria tenuis, 33
Amblirion, 62
Andrachne pumila, 66
Antennaria canadensis *var.* isabellina, 14
Anthostoma picaceum, 43
Ascobolus geophilus, 16
Ascochyta thaspii, 33

Belonidium heteromorphum, 16
Bivonea, 61
Bonamia multicaulis, 62
Bonaparte swamp, 9–11
Botrytis sphaeriae-typhinae, 17

Cacalia rotundifolia, 67
Calamagrostis inexpansa, 7
Calosphaeria pulchella, 17
Carex albicans, 9
  albursina, 9
  tenuiflora, 9
Catalog of the ferns and flowering plants of New York, 5
Cercospora boehmeriae, 16
  caulophylli, 16
  cypripedii, 33
  epigaeae, 33
  granuliformis, 17
  longispora, 17
  ziziae, 33
Chamaesyce vermiculata, 8
Cladosporium gleosporoides, 17
Clitocybe media, 17–18
Coniophora byssoidea, 17
Corticium atrovirens, 18
  bombycinum, 18
  confluens, 18
  lactescens, 19
  lacteum, 19
  lividum, 19
  roseum, 19
Croptilon, 61
  hookerianum, 61
Cyphella laeta, 19
  muscigena, 19

Dearness, John, New or noteworthy species of fungi, 32–43
Dendrophoma pruinosa, 33
Dermatea lobata, 33
Diaporthe aceris, 34
  celastrina, 34
  menispermi, 34
  triostei, 34
Didymella agrostidis, 34
  superflua, 35
Didymosphaeria parnassiae, 19
Discula discoidea, 19

Eucnide, 67
  parryi, 67

Ferns and flowering plants of New York, catalog, 5
Field work, 5
Fomitiporia laminata, 19
Fungi, notes on, 15–25; new or noteworthy species, 32–43

Geboscon, 66
  bivalve, 66
Genesee county, 8
Gloeosporium acutiloba, 35
  paludosum, 35
  venetum, 20
Gnomonia petiolophila, 35
Gnomoniopsis acerophila, 36
Greene county, 9
Gregoria, 68

Heliotropium nuttallii, 61
Hendersonia linderae, 36
Herkimer county, 11–14
Hicoria dunbarii, 14
  glabra *var.* megacarpa, 12
  laneyi, 14

Hicoria ovalis, 13
var. acuta, 13
var. obcordata, 13
var. odorata, 13
ovata *var.* fraxinifolia, 12
var. nuttallii, 12
House, Homer D., New or noteworthy species of fungi, 32–43
Hymenochaete badio-ferruginea, 20
Hypochnus atroruber, 20
isabellinus, 20
pallidofulvus, 20
Hypocrea pallida, 20
Hypogon, 67
verticillatum, 67
Hypolytrum, 61
maculatum, 62
Hypoxylon transversum, 36
Hysterium thujae, 21

Ice, damage to trees, 7
Identifications, 6
Inocybe, genus, studies in, 43–60
albodisca, 59
castanea, 59
comatella, 56
decipientoides, 58
eutheloides, 56
excoriata, 57
fallax, 58
fastigiella, 53
fuscodisca, 54
griseoscabrosa, 55
infelix, 55
infida, 59
intricata, 59
leptocystis, 54
maritimoides, 57
minima, 56
mutata, 54
nigrodisca, 59
paludinella, 58
radiata, 57
rimosoides, 53
serotina, 56
squamosodisca, 53
stellatospora, 59
subexilis, 58
subfulva, 60
subochracea, 56
subtomentosa, 52
umboninota, 57
unicolor, 54
violaceifolia, 55
Investigations, 5

Jacksonia, 63–64
Jacquemontia obcordata, 63

Kauffman, C. H., Studies on the genus Inocybe, 43–60

Lachnea coprinaria, 21
Leptoloma cognatum, 7
Leptosphaeria collinsoniae, 36
Leptostromella scirpina, 37
Leptothyrium conspicuum, 37
Lespedeza intermedia, 15
Lewis county, 9
Lithospermum lutescens, 61
Local flora notes, 7–15
Lonicera glaucescens, 11
Lophodermium exaridium, 21
petiolicolum, 37

Madison county, 9
Marsonia lonicerae, 37
Merulius terrestris, 21
Metasphaeria aulica, 38
Microdiplodia populi, 21
Microthyrium microscopicum, 38
Mycosphaerella, index to New York species, 25–31
plantaginicola, 38

Nectria sulphurea, 21
Nigredo houstoniata, 21
Nummularia nummularia, 22
Nymphoides, 65

Oenothera rydbergii, 61
Oneida county, 14
Orontium aquaticum, 9

Panicularia borealis, 9
fernaldii, 11
Panicum lindheimeri, 8
scribnerianum, 8
tenessense, 14
villosissimum, 11

Patellaria peckii, 22
Peniophora carnosa, 22
gigantea, 22
globifera, 22
greschickii, 22
heterocystidia, 22
subincarnata, 22
Periconia pycnospora, 38
Perideridia, 68
Pezicula carpinea, 24
Phialea scutula, 22
Phlyctaena complanata, 23
Phoma dulcamarina, 38
Phomopsis impatientis, 39
Phyllachora panici, 23
Phyllosticta steironematis, 23
Plant names, necessary changes, 60–69
Pleospora herbarum, 39
Poa cuspidata, 7
Polanisia, 63
Polythelis thalictri, 24
Puccinia commutata, 23
curtipes, 23
trientalis, 23
Pyrenopeziza artemisiae, 23

Ramularia eamesii, 39
montana, 39

Saccardinula alni, 40
Scirpus atrocinctus *var.* condensatus, 62
cyperinus *var.* congesta, 62
microcarpus *var.* confertus, 62
Scolocotrichum graminis, 23
Senecio obovatus, 11
Septoria acetosella, 40
flagellaris, 40
hieracicola, 40
hydrophylli, 41
increscens, 24
leptostachyae, 41
nabali, 24
scutellariae, 24
vincae, 41
Solenia poriaeformis, 41
Sphaeropsis ataphyleae, 42
foliicola, 41
hyalina, 41
Stachys grayana, 60
riddellii, 60
Stagonospora collapsa, 42
meliloti, 42

Thelypteris, 69
Thyella hirtiflora, 63
Tioga county, 15
Togninia transversa, 24
Trachysperma, 65
aquatica, 65
humboldtiana, 66
lacunosa, 66
Trachyspermum grayana, 66
Trees, damage by ice, 7

Uredinopsis mirabilis, 25

Venturia cassandrae, 42
fimbriata, 43
kalmiae, 43
Vermicularia peckii, 25
violae-rotundifoliae, 25
Veronica baxteri, 11–12
brittonii, 15
glandifera, 15

Washington county, 15